STIKINE REGION ECONOMIC PROFILE

Prepared for:

Regional District of
Kitimat-Stikine
Economic Development
Commission

Prepared by:

DPA Consulting Limited
Vancouver, BC

December 1982

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The responsibility for the content of this report is the consultant's alone, and the conclusions reached herein do not necessarily reflect the opinions of those who assisted during the course of this investigation or the federal and provincial governments which funded the study.

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FORWARD

This Economic Profile of the Stikine Region was prepared for the Regional District of Kitimat-Stikine by DPA Consulting Limited.

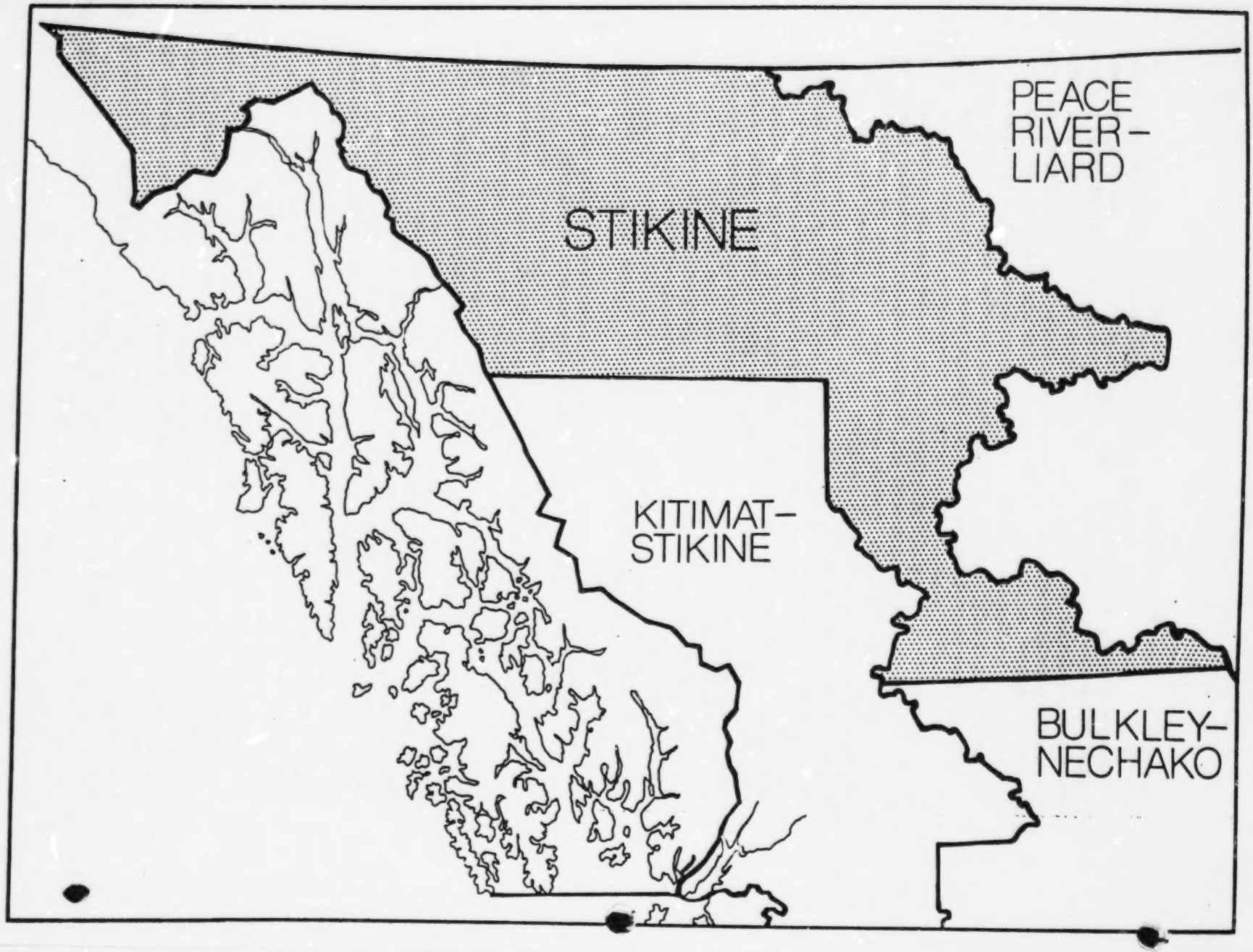
The Regional Economic Profile provides a summary of the region's natural resources, demography, history, economy, settlement pattern, infrastructure, and development potential. Community Profiles have been prepared for the settlements of Cassiar, Atlin, and Dease Lake. These profiles provide supplemental detail at the community level. Each profile was designed so that it could be used independently of the Regional Profile, and consequently provides an overview of local history, demography, economy, scope of local business, infrastructure, and development prospects.

The intent of the Regional Economic Profile and the Community Profiles is to provide a catalogue of resources available to those interested in economic development within the region. These profiles were not intended, however, to be an economic opportunity study.

The data used in this report were obtained from published and unpublished sources in both government and industry. An extensive interview process with community and business leaders provided the basis for the community profiles. These interviews served to update available data and to provide qualitative assessments and interpretations of present and future regional conditions.

MAP 1

STIKINE REGION



1.Ø INTRODUCTION

1.1 Location and Size

In 1965, legislation was introduced in BC which made it possible to provide a federated approach to local control over problems transcending municipal boundaries in either a metropolitan or non-metropolitan area. The Province was subsequently divided into 29 areas, of which 28 now have local administration units called Regional Districts. The Stikine Region is the sole area without a local coordinating body. The Stikine occupies the northwest corner of BC. It shares a northern boundary with the Yukon Territory and a western boundary with the Alaska Panhandle. The Peace River-Liard, Bulkley-Nechako, and the Kitimat-Stikine Regional Districts form the eastern, southern, and southwestern boundaries, respectively (see Map 1).

When compared with the Regional Districts in BC, the Stikine Region is the second largest. It occupies an area of 113,188 square km (43,7ØØ square miles), and represents 11.9% of the Province's total area. The region is sparsely populated and relatively isolated. The Stikine houses the communities of Atlin, Cassiar, and Dease Lake. This region has no incorporated settlements, and is not incorporated itself.

1.2 History

Many of the earliest events in the Stikine were related to the maritime and inland fur trade. In 1799, the Russian American Company was granted full trading privileges on the Pacific Coast and islands north of the 55th parallel. The Hudsons Bay Company (HBC) began to expand its operations in the Stikine area in 1833, and had established a fur trading post at Dease Lake by 1837. Within three years, the HBC leased trading rights to the area known today as the Alaska Panhandle, and occupied a Russian post (Fort Stikine) at the site of the present city of Wrangell, Alaska. These trading privileges in the coastal strip ended in 1867 when the Russian Imperial Government sold its North American territorial interest to the United States.

In 1861, attention was drawn to the Stikine region when a minor gold strike occurred on the Stikine River near the present site of Telegraph Creek. This led the the formation of the Stikeen Territory as an administrative adjunct to the Crown Colony of British Columbia. The new Territory extended north to the 62nd parallel (now part of the Yukon), east to the 125th meridian (east of the Rocky Mountain Trench), south to the Skeena River, and west to Russian Alaska. In 1863, the Stikeen Territory was absorbed into BC.

Further attention was drawn to the region in 1865, when the Collins Overland Telegraph Company began construction on a telegraph line which was to be part of an intercontinental communications link between the USA and Europe. Although the project collapsed in 1866 following the successful laying of the Trans Atlantic Cable, the right-of-way (Telegraph Trail) had been cleared from the Stikine River most of the way north to Atlin and Teslin Lakes.

The lure of gold, which drew thousands of miners into BC's southern interior beginning in 1858, was also responsible for the settlement and political development of the Stikine. The first Stikine gold-rush of major significance was the result of the efforts of Angus McCulloch and Henry Thibert who set out to prospect the Mackenzie River country. In 1872, they made a minor gold strike on the Liard River near the northeast boundary of today's Stikine Region and, in 1873, they made a rich gold find at Thibert Creek (on Dease Lake). Later in the same year, Captain Billy Moore discovered a more valuable gold deposit on Dease Creek. A flood of miners came up the Stikine River from Wrangell to Glenora on river boats, and then by land to Dease Lake in 1874. The town of Laketon sprang up at the mouth of Dease Creek and became the centre of the district. Laketon's population in 1874 was 2,000.

With most of the streams near Laketon being actively worked in 1874, Henry McDame headed north along the Dease River and discovered the richest placer gold stream in the region (McDame Creek). The town of Centreville was built 145 km (90 miles) north of Laketon to accommodate the McDame Creek miners. Between 1874 and 1877, McDame Creek, Dease Creek and Thibert Creek together produced $2.5 million in placer gold. By 1880, however, production from the area's creeks was falling, as the easily accessible gold deposits were worked out. Hydraulic methods were introduced in 1897, but by the turn of the century, Laketon and the Cassiar Mines were almost abandoned.

The well-known Klondike gold rush of 1897 brought miners and adventurers from all over the world. While the majority took the pack-trail from Skagway to Dawson City in the Yukon, many hiked the Telegraph Trail. At the start of the Klondike activity, George Miller, a hotel owner in Juneau, Alaska, made a gold discovery on Atlin Lake. Later, his brother, Fritz Miller, and Kenneth McLaren staked a claim on Pine Creek which proved to be immensely rich. Discouraged by the level of activity already underway in the Yukon and by the rigors of the long, arduous journey north, many miners chose to seek their fortunes in the Atlin Lake area. In addition to Pine Creek which became the second most valuable placer stream in the area, the following streams had gold

discoveries in 1898:

- Birch Creek - yielded a 73 oz gold nugget in 1913
- Boulder Creek - 3rd most valuable in overall production for the area
- McKee Creek
- O'Donnell River
- Otter Creek
- Ruby Creek
- Spruce Creek - yielded more placer gold than any other producer in BC (except two streams in the Cariboo)
  - still considered one of the better placer creeks in BC, despite being worked in excess of 80 years.

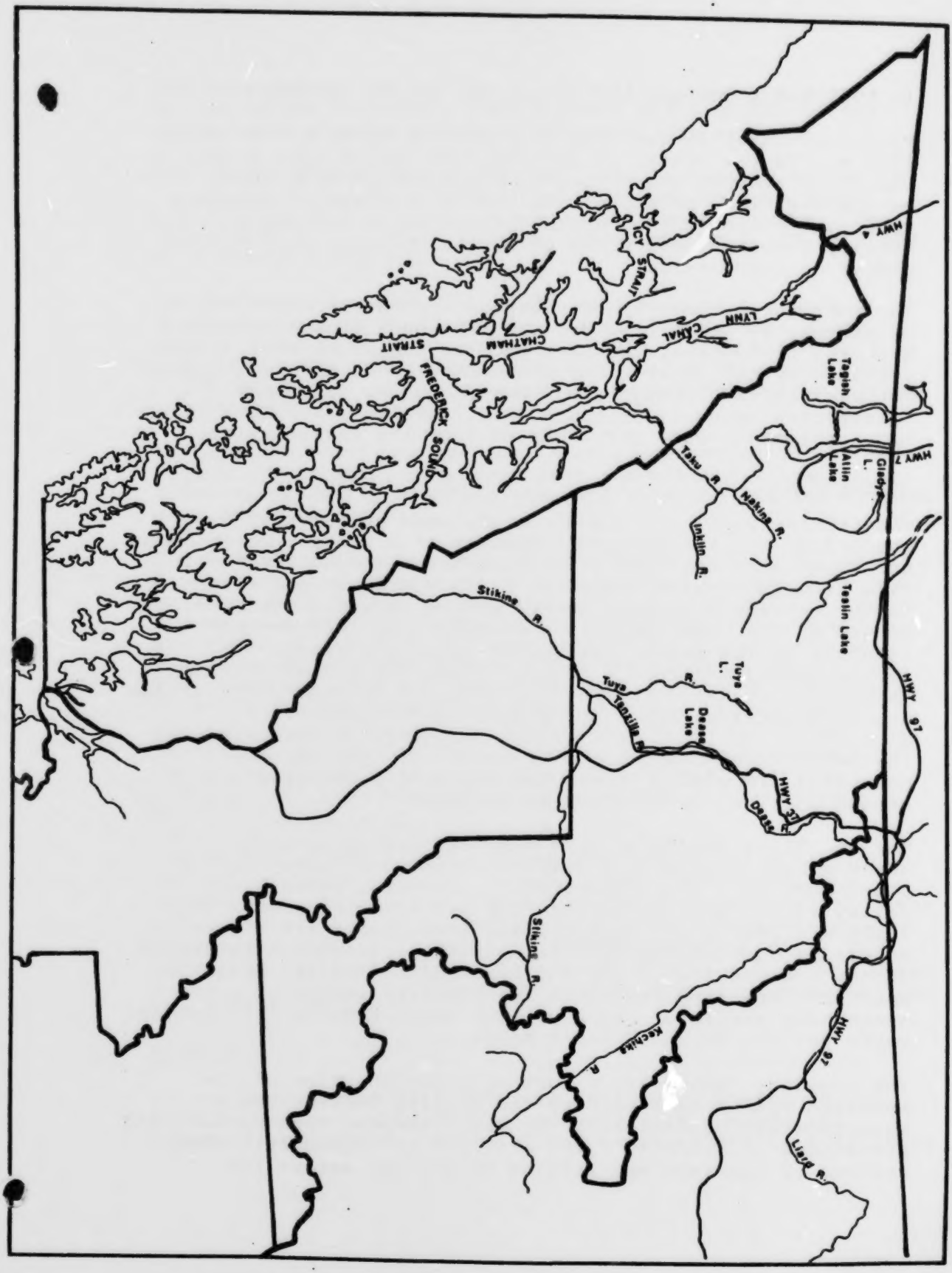
Atlin was the first town surveyed and it was soon rivaled by Pine City (also known as Discovery) which was 10 km (6 miles) upstream on Pine Creek, in the heart of the mining activity. By the end of 1899, the area supported a population in excess of 6,000 people.

In 1900, the shallow diggings were rapidly becoming worked out and hydraulic operations, dredges, and steam shovels were introduced. The need for machinery encouraged large companies to take over much of the mining activity and resulted in reduced manpower needs. Placer activity has continued in the Atlin area and it is estimated that in excess of $17 million in placer gold has been recovered since 1898.

Although the Atlin area was considered to have extensive mineral potential, there were few products other than gold which could economically survive the long and costly haul over crude pack trails and river boats to civilization. As the volume of placer gold dwindled, further mining exploration was limited.

Atlin's business district was destroyed by fire in 1900 and again in 1905. While the town recovered, its glory years were waning, and by 1909, it supported only 350 people. Pine City was all but abandoned by 1915.

The White Pass and Yukon Railway which was completed from Skagway to Whitehorse in 1900, together with a system of lake boats, became Atlin's life-line until the middle of the century. Transportation developments between the Stikine and the rest of BC began in 1926, when a road was built from Telegraph Creek to Dease Lake. In 1940, this was an important link in the transportation of materials from Wrangell up the Stikine and Dease Rivers to Watson Lake where an airport was constructed. The Alaska Highway was completed


MAP 2
RIVERS
HWY 4
ICY STRAIT
LYNN CANAL
CHATHAM STRAIT
FREDERICK SOUND
Taku R.
Tagish Lake
Atlin Lake
Gladys L.
HWY 7
Nakina R.
Inklin R.
Tesiin Lake
Stikine R.
Tuya R.
Tuya L.
Tanzilla R.
Dease Lake
HWY 37
HWY 97
Kechika R.
Liard R.

in 1942 and Atlin got its first road outlet in 1948.

Mining activity in the Stikine picked up again in the early 1950's. In the winter of 1952-53, 700 claims were staked in the Atlin area on the strength of uranium bearing rocks found on the west side of Atlin Lake. In 1953, Cassiar Asbestos Corporation Ltd. opened an asbestos mine to develop the high quality reserves discovered on McDame Mountain near the old placer mining centre.

The most recent developments centre around the construction of Highway 37 which provides a north-south link between the Stewart, Dease Lake, Cassiar, and the Alaska Highway. This corridor opened in 1972 and was connected to Highway 16 (near Terrace) in 1976. Highway 37 has become an important transportation corridor since 1978, when it was chosen as the major shipment route for asbestos from the Cassiar Mine.

1.3 Topography

The Stikine Region is rimmed on the east and west by mountains, and its interior consists of a plateau which opens northward into the Yukon. The mountains can be divided into five principal units. The St. Elias Mountains are situated in the extreme northwest corner of the Region. The Boundary Ranges of the Coast Mountains straddle the International Boundary on the west. The Skeena Mountains extend southeastward and form a boundary with the Kitimat-Stikine Regional District. The Kechika Range is located north of the Skeena Mountains, but also extends in a southeastern direction. It forms part of the northeastern boundary with the Peace River-Liard Regional District. The Cassiar Mountains lie wholly within the Region's boundaries and extend parallel to the Kechika Range.

The St. Elias Mountains have a block-like appearance, with sheer slopes rising from deep valleys and leveling toward broad summits. The difference in elevation between the valley floors and the surrounding peaks is often more than 2,100 m (7,000 ft). Rising above these peaks are higher mountains such as Fairweather Mountain. This peak is one of Canada's highest at 4,650 m (15,250 ft). The St. Elias Mountains are separated from the Boundary Ranges by a connecting series of major valleys which provide an important route for the Haines Cut-off Road.

The Boundary Ranges are a northerly continuation of the mountain system that borders the Pacific Coast. These mountains are characterized by steep slopes, high relief, and elevations of 2,100 to 3,000 m (7,000 to 10,000 ft). The valleys of the Taku and Stikine Rivers cut across the

Boundary Ranges and provide historically important access routes to the interior. (Map 2 shows the location of the major river systems and water bodies in the region.)

The Skeena Mountains are distinguished by closely spaced ranges separated by a network of prominent valleys that include the headwaters of the Nass and Skeena Rivers. The peaks rise to generally uniform elevations of 2,100 to 2,400 m (7,000 to 8,000 ft).

The Kechika Mountains lie on the west side of the Kechika River which flows north to the Liard. The Kechika River Valley forms part of the Rocky Mountain Trench which is a great flat-bottomed valley with steep sides extending over 1,500 km (930 miles) from below the Canada/USA border almost to the Yukon/BC border.

The Cassiar Mountains are the least rugged mountains in the Region. Typically, they form wide and often flat-topped summits, gradually blending westward into the Stikine Plateau at 1,200 m (4,000 ft).

The Stikine Plateau is made up of several units. The area as a whole has the appearance of an extensive tableland with a surface which varies from smooth and level to rolling and broken. In several places, prominent peaks, some of which are cones of extinct volcanoes, break the surface of the plateau. Where large rivers cross the plateau, the valleys are generally wide and deep. The Grand Canyon of the Stikine River is the most famous of these steep-walled valleys. Glaciers and icefields are very extensive in the Coast Mountains, but in the drier interior they are relatively rare. Along the axis of the Boundary Ranges, sweeping glaciers and huge icefields extend as low as the deepest river valleys.

The rivers of the Stikine Region drain in three directions. In the northwest portion, several large lakes drain the surrounding sector of the interior plateau northward into the Yukon River. In the northeastern portion, the Dease River drains the Cassiar Range north into the Liard River. The remainder of the interior plateau and almost all of the Coast Range are drained by fast flowing rivers moving westward into the Pacific Ocean.

1.4 Climate

As may be expected at a northern latitude, winters in the Stikine Region are very long and cold, and summers are pleasant, but brief. On an annual basis, there is a tendency

for temperatures to be higher in the protected valleys than in the mountains, and precipitation is lowest in the deep valleys.

The level of precipitation changes dramatically from the coastal mountains to the interior plateau. The Boundary Ranges act as a barrier to cool, moist air moving eastward from the North Pacific Ocean. This results in rain levels which generally exceed 1,016 mm (40 inches) annually. The high slopes receive 1,524 to 2,540 mm (60 to 100 inches). The surface of the Stikine Plateau is much drier with an estimated annual precipitation of 381 to 508 mm (15 to 20 inches). This compares well with the dry belts of BC's southern interior. The Cassiar Mountains present a second barrier to Pacific air and result in rain levels estimated to be between 508 and 762 mm (20 to 30 inches).

Winter is the dominant season in the Stikine. In general, average temperatures are below 0° C from November to April. Under certain conditions, winter temperatures are extremely cold and may drop to -50° C. The lowest temperatures are usually experienced in the broad, deep valleys. Snowfall measurements tend toward 140 to 165 cm (55 to 65 inches). These figures are greatly exceeded in the mountains, where 760 cm (300 inches) may fall in a typical winter.

Spring is a short transition period spanning May and June. It is also a season during which thawing conditions make surface travel difficult. Spring break-up on the rivers and lakes generally occurs in May and early June. East of the Boundary Ranges, spring is the driest season.

In summer, the long hours of daylight produce rapid plant growth and, except for local frost pockets, plant growth is uninterrupted during July and August. The maximum temperatures may reach 27 to 32° C, although afternoon readings in the low 20's are most common.

In September and October, the days shorten rapidly. The first frost of autumn is normally recorded in early September and the growing season ends by late September. In general, the period without frost is long enough to permit only the hardiest vegetation and field crops to reach maturity.

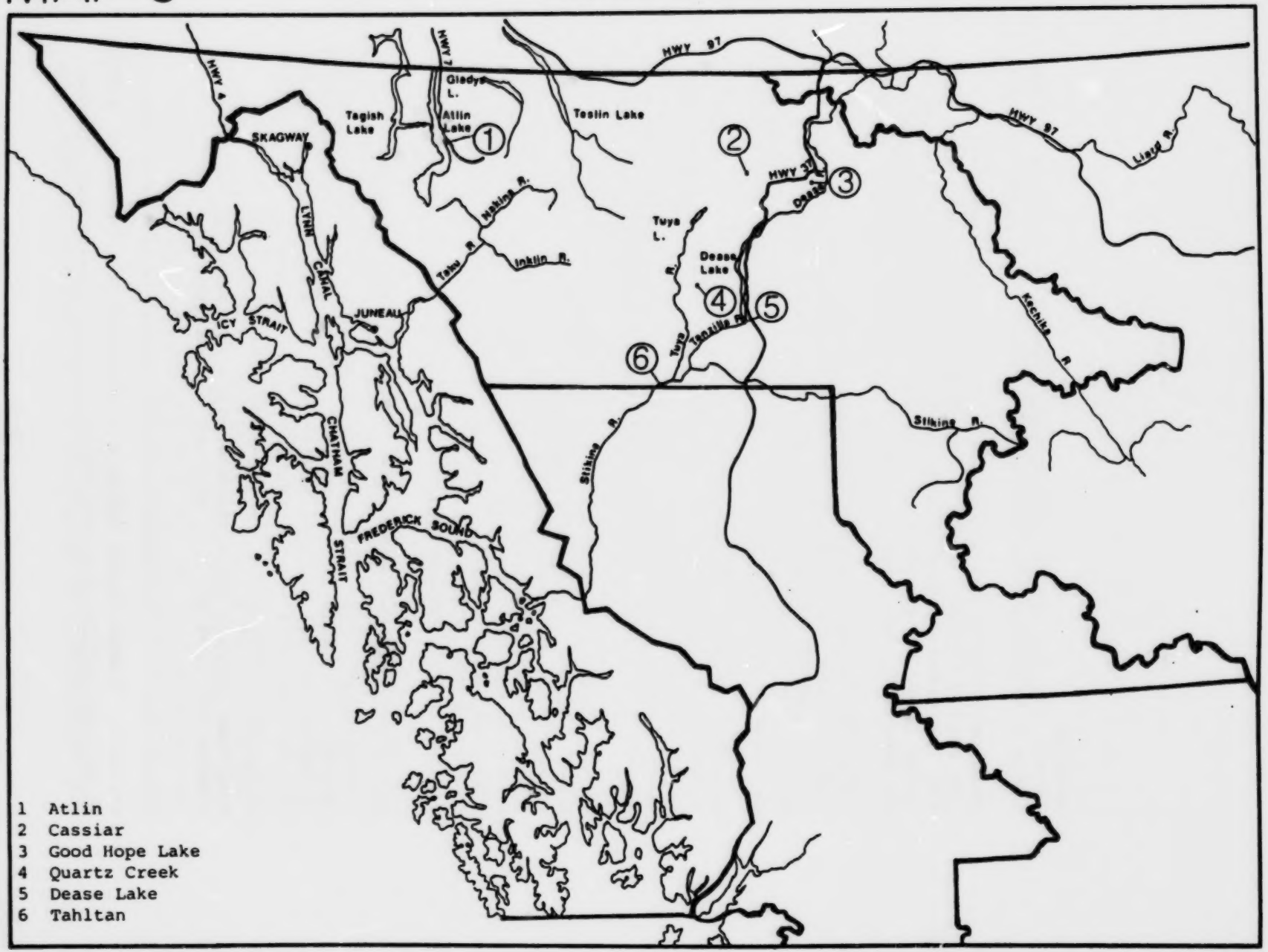
Table 1 displays the average temperature and precipitation levels for the three significant population centres in the Stikine.

TABLE 1: CLIMATE COMPARISON FOR THREE SETTLEMENTS

	Mean Daily Temperature (°C)	Extreme Temperature (°C)	Mean Rainfall (mm)	Mean Snowfall (cm)
Atlin	-0.2	-50/30	162	121.4
Cassiar	-2.9	-47/29	292	408.7
Dease Lake	-1.2	-51/34	226	186.7

MAP 3

COMMUNITIES



2.0 POPULATION

2.1 Size

In 1981, the population of the Stikine Region was 1,953 which represents 0.07% of the 1981 BC population. The Region has maintained this relative size for the past 20 years (see Table 2). It is not likely that the Stikine will significantly increase its share of the BC population in the foreseeable future.

TABLE 2: RECENT POPULATION HISTORY FOR THE STIKINE REGION

Year	Stikine	British Columbia	Stikine as % of BC Population
1961	1,224	1,629,082	0.08%
1966	1,615	1,873,674	0.09%
1971	1,470	2,184,621	0.07%
1976	1,545	2,466,608	0.06%
1981	1,953	2,744,467	0.07%

2.2 Distribution

The population in the Stikine Region is largely centred in three relatively isolated communities and one Indian Reserve. (A second Indian Reserve is officially listed as part of the Kitimat-Stikine Regional District, but the location of the Tahltan Band is very close to the boundary of the Stikine Region.) There are no federal Census Subdivisions or provincial Electoral Areas in the Region.

Table 3 lists the population of the settlements in the Stikine Region and Map 3 shows their locations. These communities represent in excess of 90% of the population, the balance of which is spread thinly throughout the rest of the Region. The population density for the entire Region is only 1.7 persons per 10,000 ha (0.7 persons per 10,000 acres). Figure 1 shows the relative size of the population centres for the Stikine.

2.3 Growth Trends

During the 20 years from 1961 to 1981, the population of the Region has fluctuated somewhat in response to the level of mining activity. This fluctuation is illustrated for 5 year periods in Figure 2 (and Table 1, Appendix I). The growth over the past five years is largely attributable to the opening of Highway 37 which connects Highway 16 to the Alaska Highway, and to the increased commercial usage of this corridor. The communities that have been affected the most are Dease Lake and Cassiar. Over the 20 year period from 1961 to 1981, the Region's compounded annual growth rate of 2.36% is only slightly lower than the 2.64% experienced by BC during the same period.

2.4 Demographics

In 1981, the Stikine Region had a slight predominance of males, whereas BC had an equal number of males and females. When the population of the Stikine was compared to that of BC, in all but three ages groups, the Stikine had a higher proportion of males. Figure 3 illustrates this comparison. The largest differences occur in the age groups 5 to 9 and 45 to 54. In the former group, the Region's male population represents 62% of the total population, whereas for the provincial population the percentage is 51%. In the latter group, the corresponding percentages are 61% and 52%. (Note: While Figure 3 also displays a large difference in the 55 to 64 and the over 65 age groups, the actual Stikine population in these groups is small and comparisons are less significant.)

The age distribution of the Stikine Region's population also differs significantly from that of the provincial population and is illustrated in Figure 4. 85% of the Stikine population is under the age of 45 compared to 70% for BC as a whole. This difference is found in two age categories in particular. In the Stikine Region, 25% of the total population is in the 25 to 34 age group and 22% is in the 0 to 9 age group. By comparison, the percentages for these age groups in BC are only 18% and 14%, respectively. This suggests that there are proportionately more young families with young children in the Stikine than in the province as a whole. A full breakdown of the age and sex composition of the Region's population and the provincial population is shown in Table 2, Appendix I.

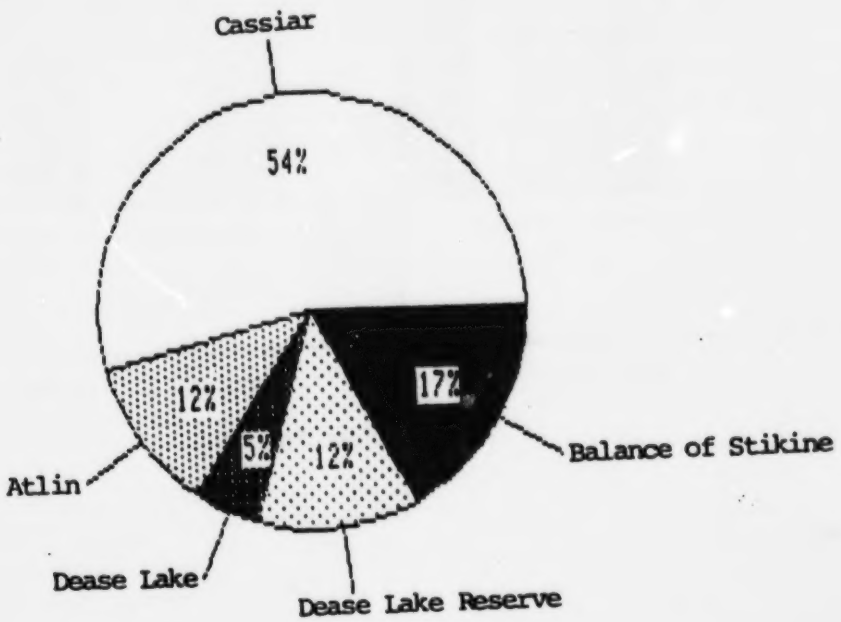
Ethnic background statistics also differ between the two populations. Figures 5 and 6 (and Table 3 in Appendix I) present the 1971 ethnic composition for BC and the Stikine, respectively. As with the Kitimat-Stikine Regional District, the Stikine Region's population has a higher proportion of people of Native origin than does the provincial population. This is balanced by a smaller percentage of Stikine residents with British origins. Although the 1981 figures were not

TABLE 3: POPULATION OF COMMUNITIES IN THE STIKINE REGION

Community	1981 Census Population
Cassiar	1,053
Atlin	230
Dease Lake	100*
Dease Lake Indian Reserve	237
	1976 Census Population
Good Hope Lake	117
Quartz Creek	23
Pillman Heights	10
Graham Inlet	3

* Local estimate of population

FIGURE 1: A COMPARISON OF COMMUNITY SIZE
(BASED ON 1981 CENSUS DATA)



available at the time of this report, the 1971 figures are expected to provide a reasonable estimate for ethnic background composition.

Although level of income figures were not available for individual centres in the Region, the average of $15,992 (based on 1979 personal income tax returns) was significantly higher than the provincial average of $13,277. Due to the relative size of the Cassiar population and the relatively high wages in the Cassiar mine, this high average income does not necessarily reflect the situation of the Stikine Region as a whole.

FIGURE 2: A COMPARISON OF POPULATION GROWTH RATES EXPERIENCED BY THE STIKINE REGION AND BC (BASED ON CENSUS DATA)

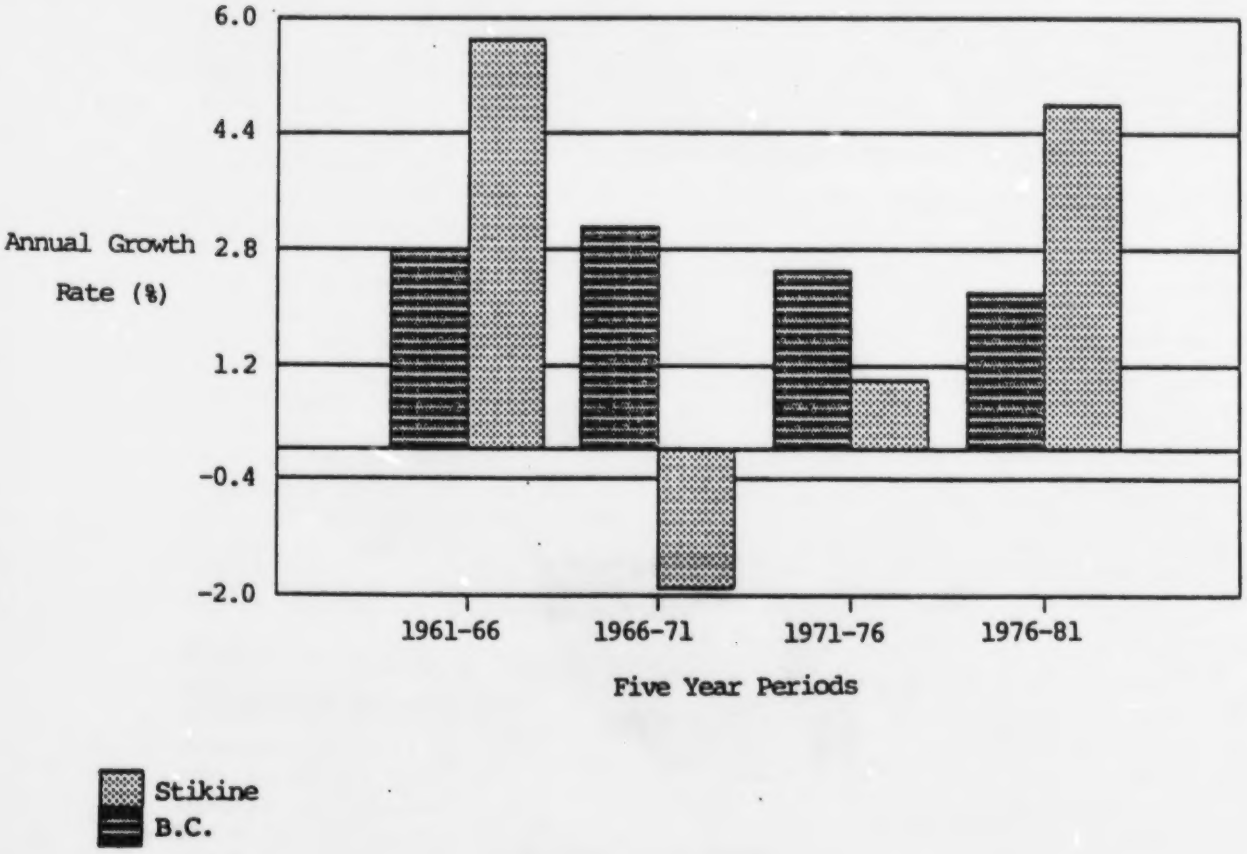


FIGURE 3: A COMPARISON OF THE SEX DISTRIBUTION FOR THE POPULATIONS OF THE STIKINE REGION AND BC (BASED ON 1981 CENSUS DATA)

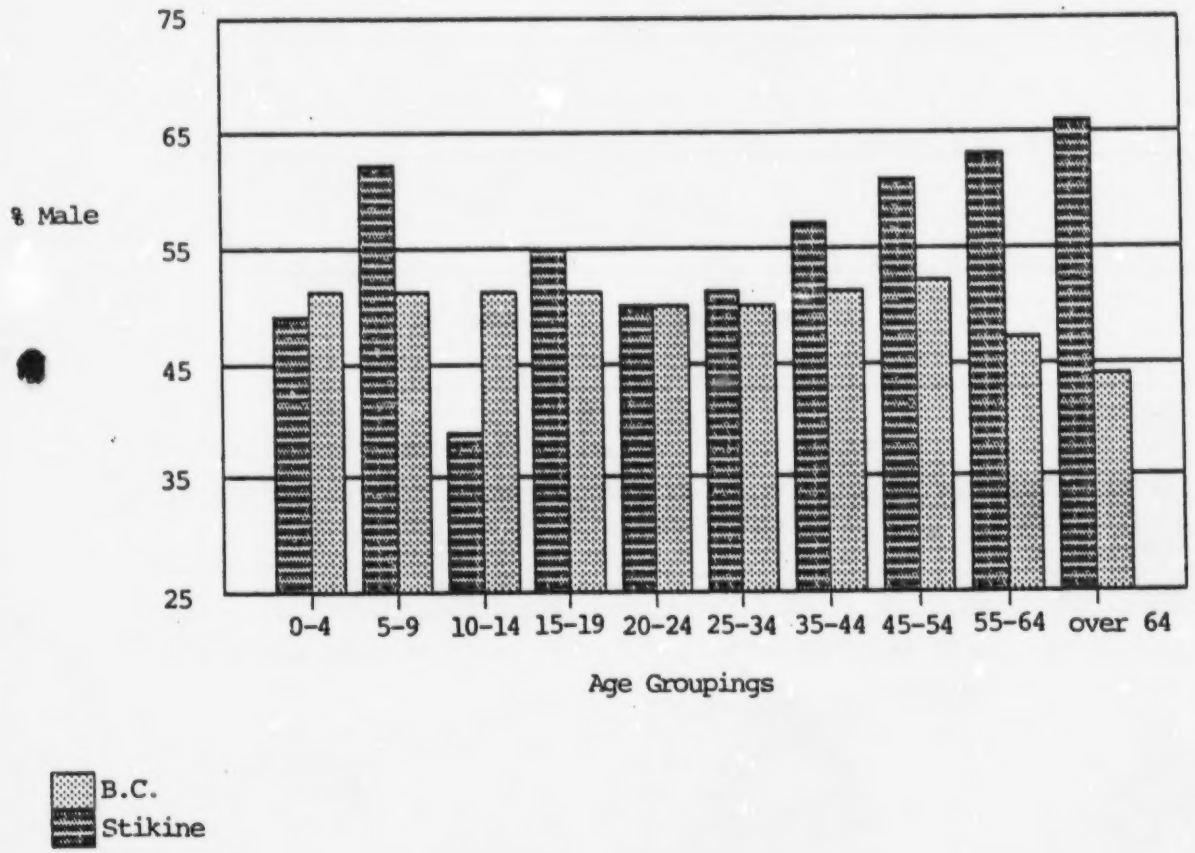


FIGURE 4: A COMPARISON OF THE AGE DISTRIBUTION FOR THE POPULATIONS OF THE STIKINE REGION AND BC (BASED ON 1981 CENSUS DATA)

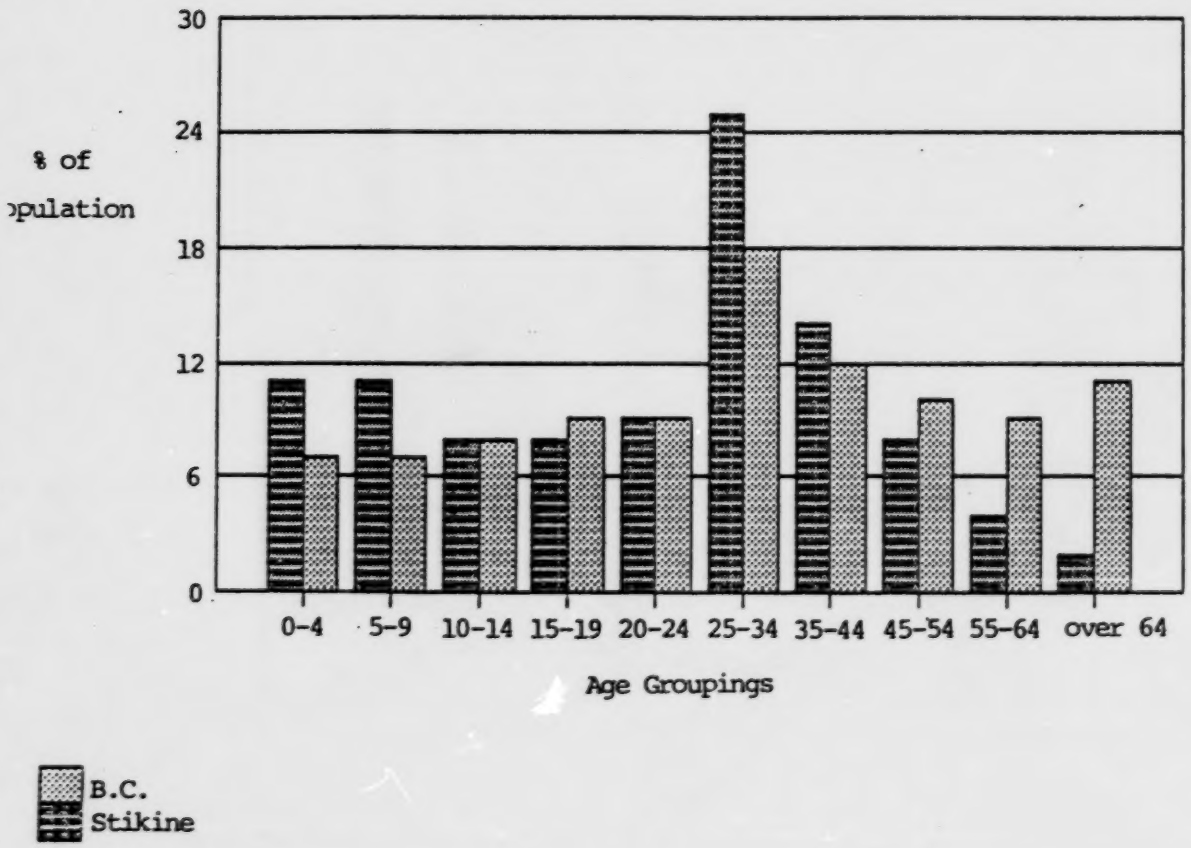


FIGURE 5: ETHNIC COMPOSITION OF BC (BASED ON 1971 CENSUS DATA)

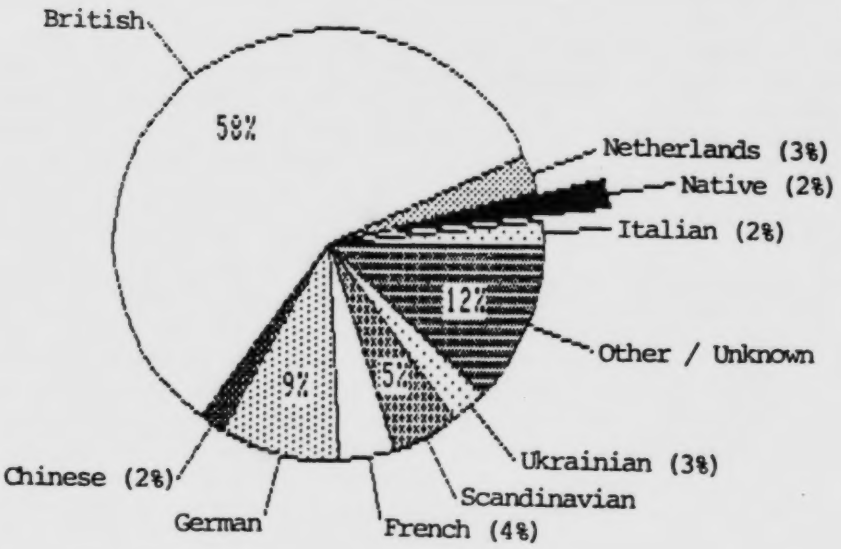
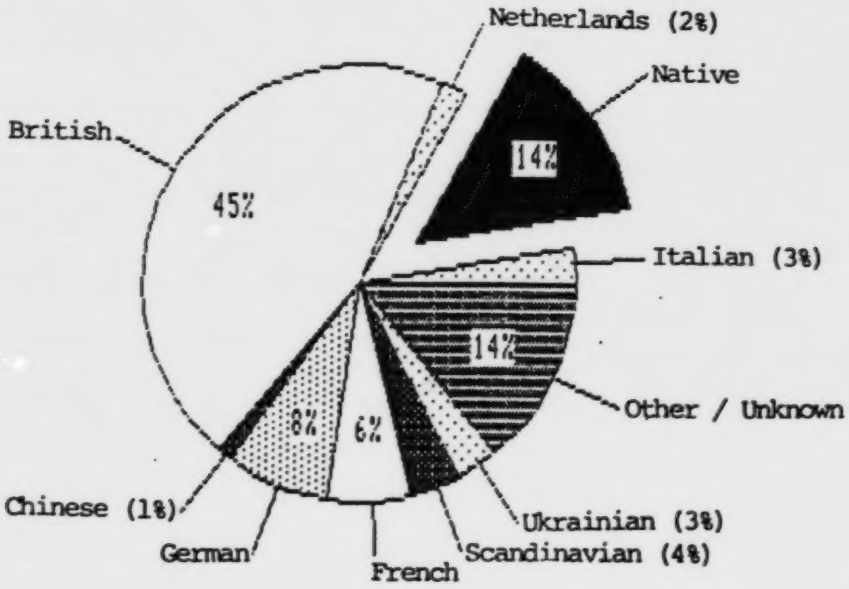


FIGURE 6: ETHNIC COMPOSITION OF THE STIKINE REGION (BASED ON 1971 CENSUS DATA)



3.Ø LABOUR FORCE

3.1 Size

The 1981 labour force figures were not available from Statistics Canada at the time this report was written. The 1976 data have been used to provide a reasonable estimate.

In 1976, the labour force for the Stikine Region represented 46.3% of the population. This compares closely to the 45.4% figure for the province as a whole. Based on a 1981 population of 1,953, the estimated labour force for the Stikine in 1981 was 9ØØ.

3.2 Composition

The Stikine's labour force has a higher proportion of males (68.5% in 1976) than the provincial labour force (62.Ø% in 1976). This is higher than would be expected from the population demographics discussed in Chapter 2.Ø. The difference can be partially explained by the higher participation rate for males in the Stikine labour force (82.4% versus 74.4% for BC). This rate reflects the regional economy's emphasis on the mining industry which has traditionally created more heavy labour related positions for males. The overall participation rate for the Stikine labour force is 67.8% compared to the provincial rate of 59.8%.

Figure 7 (and Table 4 in Appendix I) shows the labour force distribution by industry for 1971. Changes have occurred in the region since 1971, particularly in the transportation area and in other service areas related to the commercial use of Highway 37. The size of the labour force in most categories is small and therefore subject to large fluctuations with the addition of any small busineses. However, the 1971 breakdown is still relevant for most industries and is particularly appropriate for the mining industry.

Other noteworthy characteristics of the Stikine labour force include age distribution and education level. As illustrated in Figures 8 and 9 (and Table 5 in Appendix I), the 25 to 44 age group represents a significantly larger proportion of the labour force in the Stikine Region than it does in the province as a whole. The level of education in the Stikine labour force is similar to that for BC as a whole. However, there is a higher proportion of the Stikine labour force (46% compared with 42% for the province) with better than high school education. Figures 1Ø and 11 (and Table 6 in Appendix I) illustrate the education levels for both labour forces.

3.3 Unemployment

The Stikine unemployment rate for 1976 (7.7%) was close to that for the province as a whole (8.7%). However, the unemployment rate for Cassiar in 1976 was only 3.5% and for Dease Lake was 13%. Although unemployment rates were not available for all the centres in the region, the rates for Cassiar and Dease Lake suggest that the unemployment rate for Atlin was between 15% and 25% in 1976. This is consistent with local reports that only 60% of the work force have full-time jobs. Although 1981 unemployment rates for the Stikine were not available, the 1976 figures represent reasonable estimates for 1981.

FIGURE 7: LABOUR FORCE BY INDUSTRY (BASED ON 1971 CENSUS DATA)

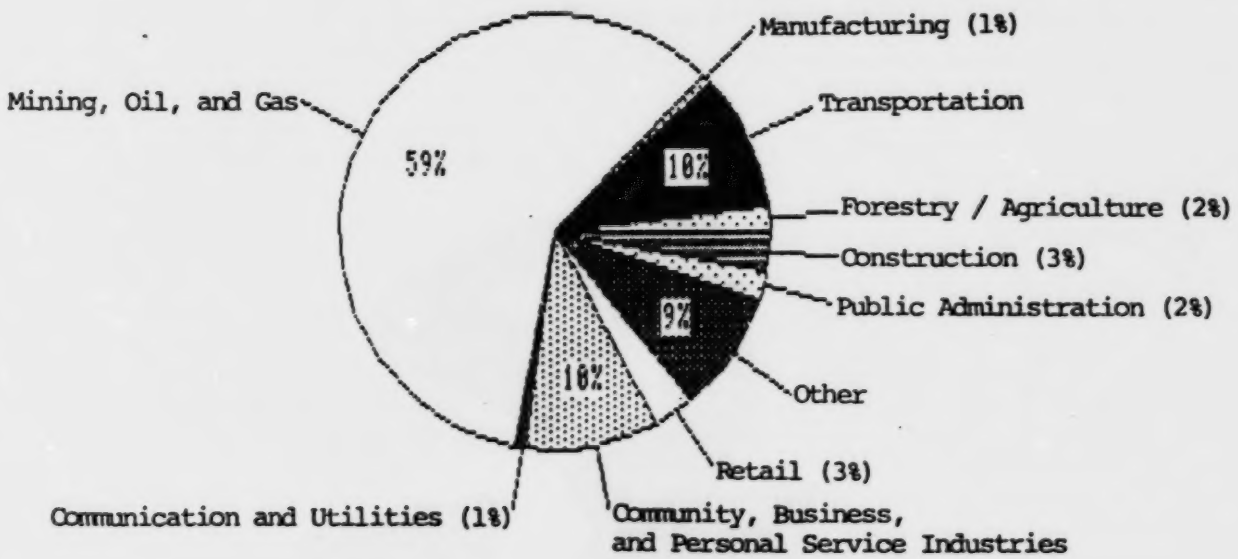


FIGURE 8: AGE DISTRIBUTION OF THE LABOUR FORCE IN BC (BASED ON 1976 CENSUS DATA)

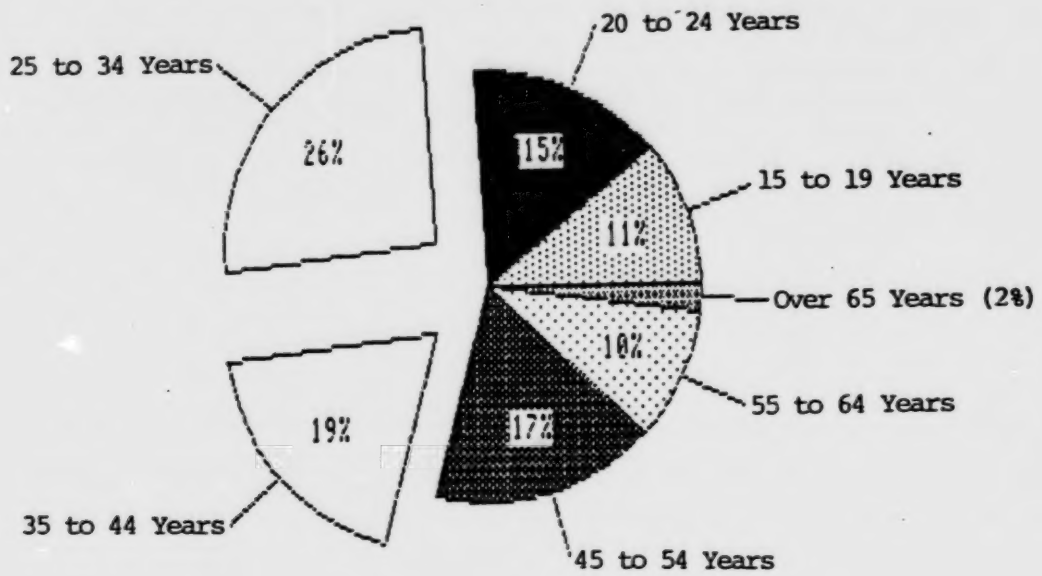


FIGURE 9: AGE DISTRIBUTION OF THE LABOUR FORCE IN THE STIKINE REGION (BASED ON 1976 CENSUS DATA)

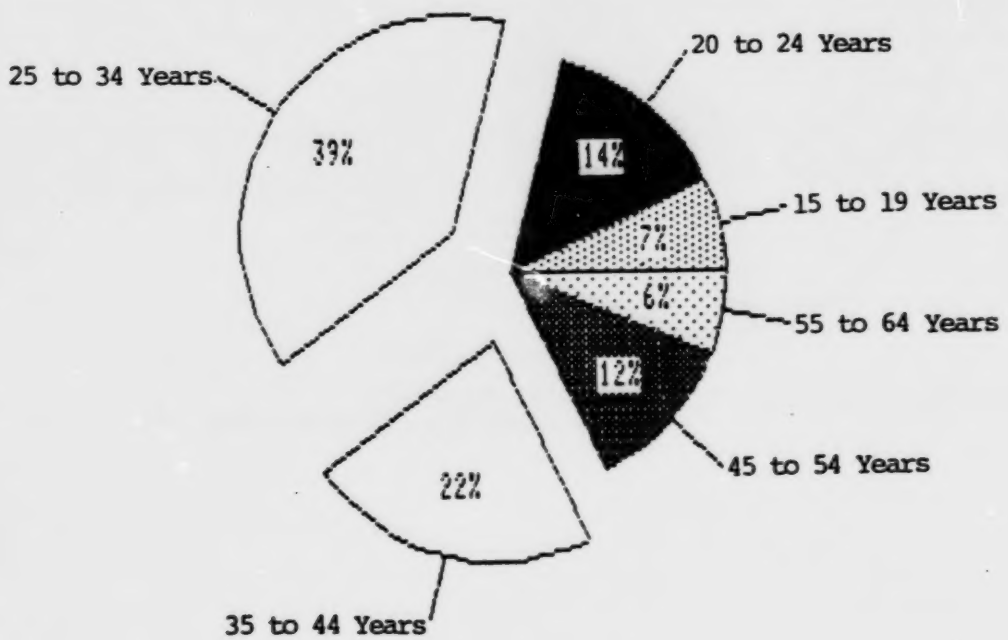


FIGURE 10: EDUCATION LEVEL OF THE BC LABOUR FORCE
(BASED ON 1976 CENSUS DATA)

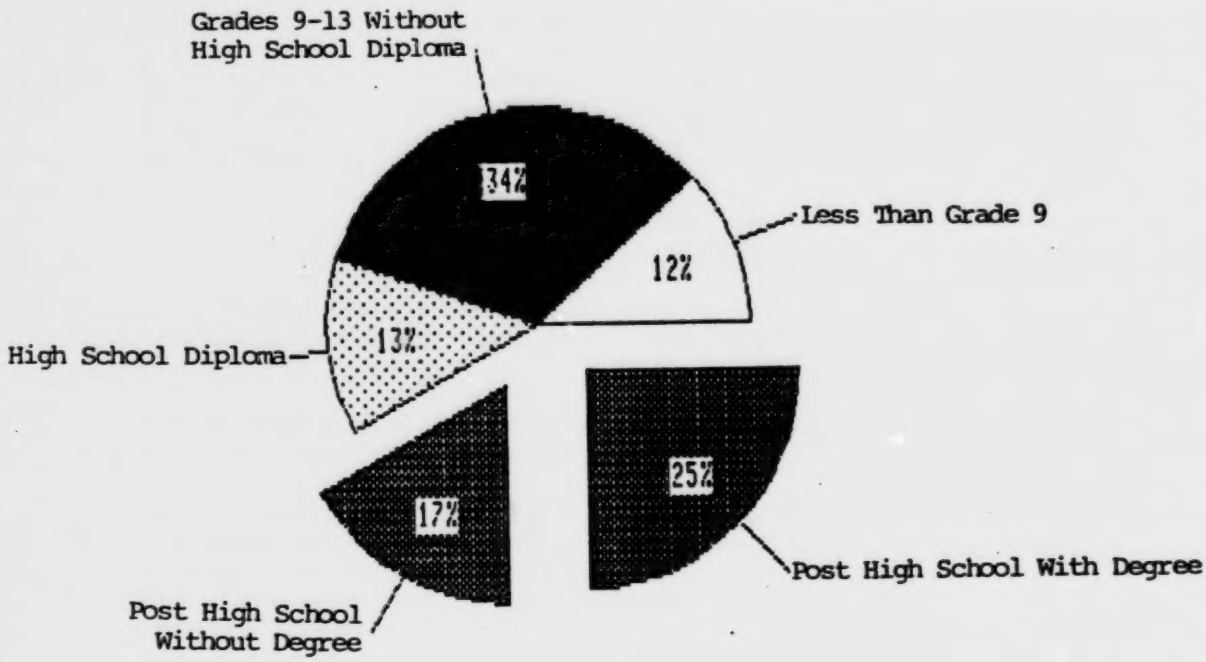
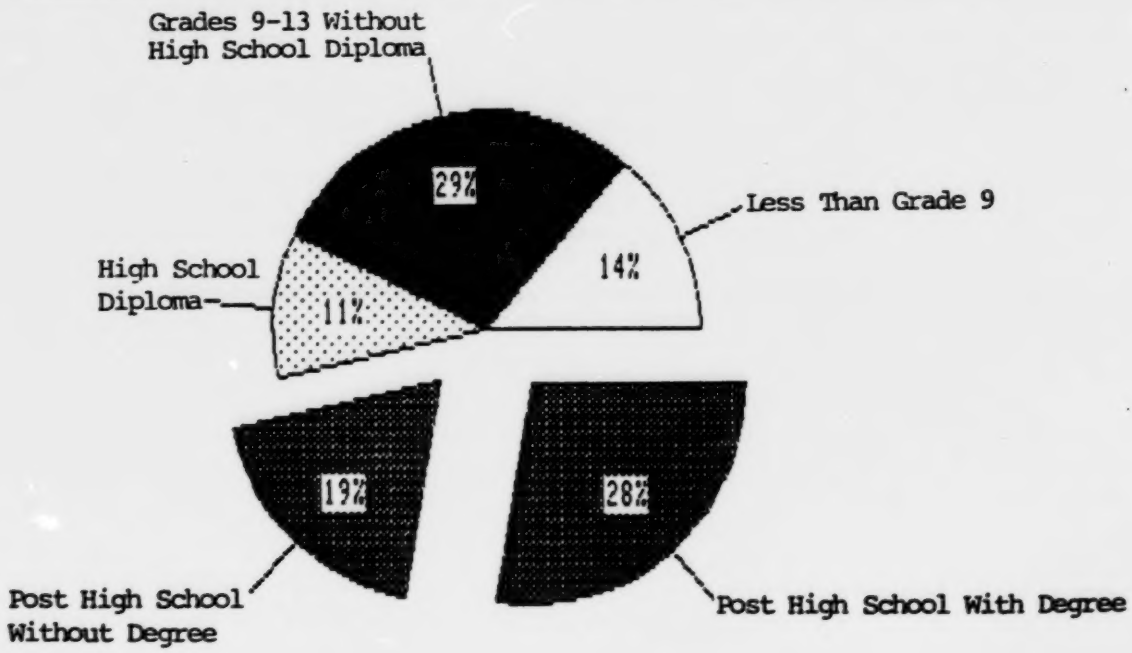


FIGURE 11: EDUCATION LEVEL OF THE STIKINE REGION LABOUR FORCE
(BASED ON 1976 CENSUS DATA)



4.0 ECONOMY

4.1 Mining

In the past, mining played an important role in the settlement and development of the Stikine Region and is still a major economic activity. All three population centres came into existence as a result of mining activity. Today, placer gold mining involves an estimated 270 people in the Atlin area and 40 people in the Cassiar area. Other active gold mines include:

	No. of People Employed	Location
Cusac Gold Mine	20	Cassiar
Erikson Gold Mine	65	Cassiar
United Ahearne	30	Cassiar

Map 4 shows the location of several operating mines and several important mineral deposits.

The largest employer in the Region and the primary reason for building Cassiar is Cassiar Resources Ltd., a Division of Brinco Ltd. Since the 1953 start-up, the milling capacity has been increased several times over the years. The present open pit asbestos mine operation has a 3,600 tonne capacity mill and produces in excess of 91,000 tonnes of asbestos fibre annually.

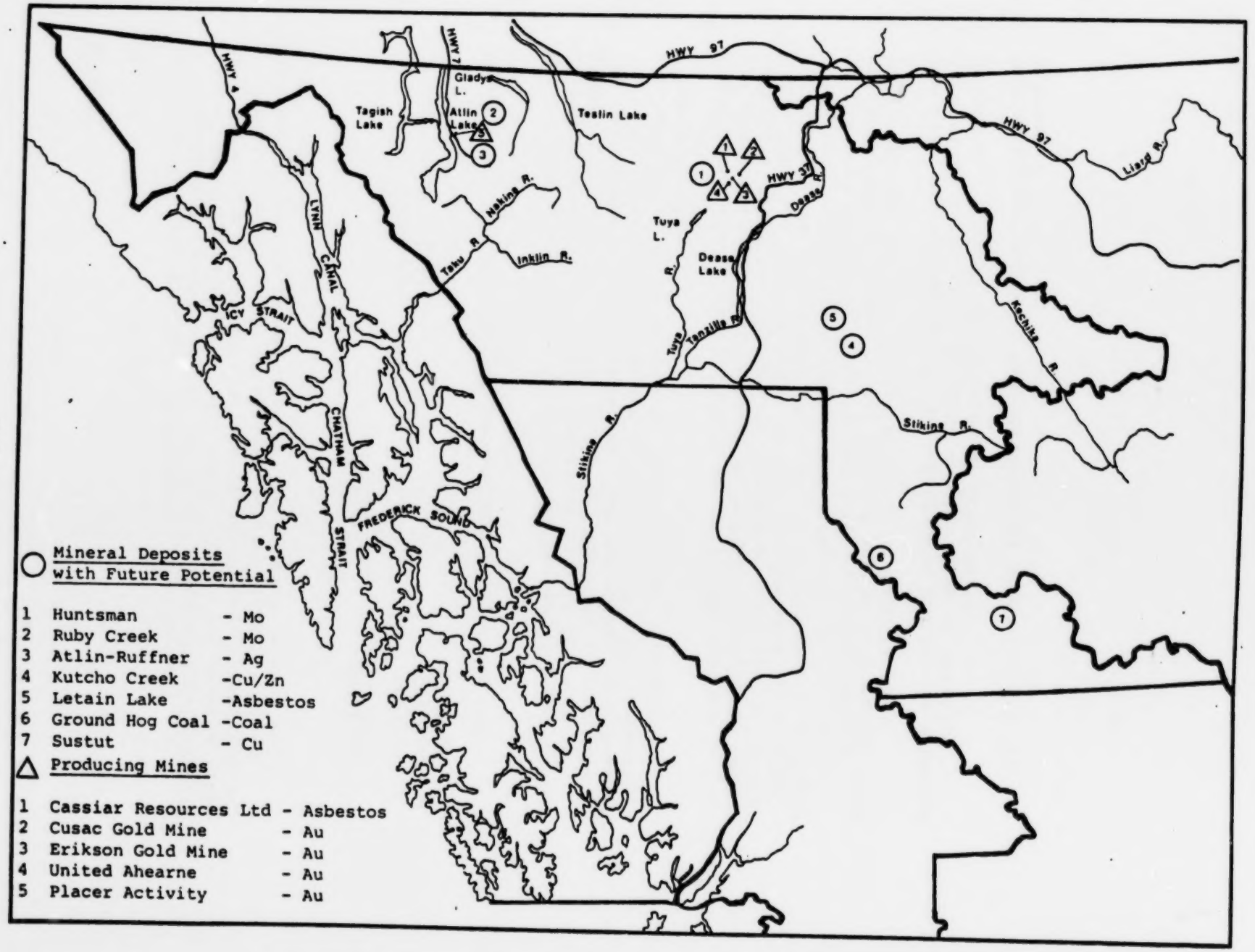
The deposit is located on McDame Mountain and the ore is transported to the mill site by an aerial tramway. In the past, the fibre was trucked to the Yukon, transported on the White Pass and Yukon Railway to the Alaskan port of Skagway, and shipped to Vancouver. The opening of Highway 37 provided a cheaper, all Canadian route. The asbestos is now trucked to the port of Stewart for shipment to the Lower Mainland. Using Highway 37 saves a rail haul, a 550 km (345 miles) road haul, and 480 km (300 miles) of ocean transport.

The mine employs approximately 600 people and has an expected life of an additional 20 years on the basis of existing reserves. Further exploration is continuing.

The following deposits have development potential for the Stikine:

MAP 4

MINING


HWY 4
HWY 7
HWY 97
Gladys L.
Tagish Lake
Atlin Lake
Teslin Lake
HWY 37
Nahlin R.
Tuya L.
Dease R.
Dease Lake
Inklin R.
Taku R.
Tuya R.
Tanzilla R.
Liard R.
Kechika R.
Stikine R.
LYNN CANAL
ICY STRAIT
CHATHAM STRAIT
FREDERICK SOUND
Mineral Deposits with Future Potential
1 Huntsman - Mo
2 Ruby Creek - Mo
3 Atlin-Ruffner - Ag
4 Kutcho Creek -Cu/Zn
5 Letain Lake -Asbestos
6 Ground Hog Coal -Coal
7 Sustut - Cu
Producing Mines
1 Cassiar Resources Ltd - Asbestos
2 Cusac Gold Mine - Au
3 Erikson Gold Mine - Au
4 United Ahearne - Au
5 Placer Activity - Au

Name	Mineral	Nearest Community
Huntsman	Molybdenum	Cassiar
Ruby Creek	Molybdenum-tungsten	Atlin
Atlin-Ruffner	Silver	Atlin
Kutcho Creek	Copper-zinc	Dease Lake
Letain Lake	Asbestos	Dease Lake
Ground Hog Coal	Coal	Stewart[1]
Sustut	Copper	Stewart[2]

[1]No community nearby; located near the headwaters of the Skeena River.
[2]No community nearby; located near the headwaters of the Sustut River.

Located 6 km (4 miles) south of Cassiar is the large Huntsman molybdenum deposit which is owned by the New Jersey Zinc Exploration Company (Canada) Ltd. The exploration and evaluation process is continuing on a joint venture basis with Shell Canada Resources Ltd. Reports indicate the existence of 100 million tonnes of 0.115% Mo, but a price of $4.35 per pound contained Mo is believed to be necessary to provide a minimum return on investment. If this property were developed, it would likely operate at 18,000 tonnes of ore per day, have a life of approximately 15 years, and employ in excess of 400 people. Power supply and metal prices appear to be major constraints to near term development.

Adanac Mining and Exploration Ltd. owns or holds options on molybdenum-tungsten claims located 37 km (23 mi) northeast of Atlin at Ruby Creek. Several companies have explored and optioned this prospect since 1970. Evaluation studies indicate a probable production rate of 15,000 tonnes per day. The level of reserves is estimated to be 201,000,000 tonnes with an average of 0.059% Mo per tonne. If the Adanac Mine were to proceed, it would potentially create in excess of 400 jobs.

The Atlin-Ruffner mine is located 16 km (10 miles) northeast of Atlin and has produced a small quantity of rich silver ore in the past. Current reserves lie between the 21,500 proven tonnes and the 100,000 estimated tonnes which are expected to yield 709 grams (25 oz) of silver per tonne. If this property were brought into production, it would be a small operation employing about 20 people.

Kutcko Creek (owned by Esso Minerals Canada) is a copper-zinc deposit located about 105 km (65 mi) southeast of Dease Lake. Based on the results of 1978/79 exploration work, the level of reserves is estimated to be 7,000,000 tonnes which average

2.7% zinc and 1.89% copper. Minor quantities of gold and silver are also present. Initial estimates suggest, however, that an 11-14 million tonne reserve is needed to justify a mine. At this level, a 1,800 tonne per day open pit mine would be likely and employment would be approximately 220 people. This is a high grade copper deposit and is of particular interest because its existence suggests that more high grade deposits may be found in areas not previously suspected to contain economic mineralization.

Letain Lake (owned by Brinco Ltd.) is an asbestos property located 96 km (60 mi) southeast of Cassiar. The fibre in this area is lower in quality and quantity than that found at Cassiar. A substantial tonnage has been confirmed, but further development is considered uneconomic at this time.

The Groundhog coal field is located near the headwaters of the Skeena River, about 240 km (150 mi) north of Hazelton and 150 km (95 mi) northeast of Stewart. The first claims were staked in 1903 and early exploration was spurred by the prospects of railway access. While the extent of reserves are unknown, the 1946 Report of the Royal Commission on Coal estimated mineable reserves at 800 million tonnes of probable and possible coal. The deposit is large, but it is primarily anthracite coal with a high ash content. This is suitable for thermal use, but not for coking.

The Sustut claims (owned by Wesfrob Mines Ltd.) lie about 32 km (20 mi) southeast of Thutade Lake, just inside the Stikine Region boundary. Reserves have been estimated at tens of millions of tonnes with a grade in excess of 1% copper. No feasibility studies have been undertaken and development efforts have not continued. However, the deposit is still considered to have mine potential.

Mining is expected to be the focus for future industrial developments in the Stikine, although metal prices will continue to affect the level of development interest. Despite the knowledge of many deposits of copper, lead, zinc, silver, gold, and molybdenum, mining in northern BC involves substantially higher costs than similar operations in the southern areas. The difficulty of access to deposits, the distance from markets, and the high cost of fuel all add to the transportation expenses. These, combined with higher power costs, higher wages, and the costs associated with creating communities to support a work force, all tend to make companies very conservative when evaluating the potential for a new mining development.

4.2 Forestry

The forest industry has not played a significant role in the development of the Stikine Region. The Cassiar Timber Supply Area (TSA) is the forest management unit that covers most of the Stikine Region. It is part of the Prince Rupert Forest Region and is headquartered at Dease Lake. Tree Farm License #1, which is administered by BC Timber, also covers a small portion of the Stikine in the area east of the Skeena Mountains.

The details of the current forest inventory, allowable cuts, and long-run sustainable yield were not available at the time this report was written. The Cassiar TSA Report is expected to be available in 1983.

The Stikine may be generally divided into two major vegetation zones: coastal forest and boreal forest (interior). The coastal forest is limited to narrows strips along the lower sections of the larger rivers. The floor and walls of the Tatshenshini, Taku, and Whiting Rivers support a cover of mixed coniferous and deciduous trees. The main species are Stika spruce and hemlock with cottonwood as a supplement on river flats.

The boreal forest is of a much lighter density than the coastal and is the prevailing forest type throughout the majority of the Stikine. The boreal forest is characterized by an open mixture of aspen, white spruce, and lodgepole pine. The severe climate, thin soil, rugged terrain, and permanent alpine snowfields reduce the extent of forested land.

The current commercial forest activities in the Stikine are very limited. There are no large scale logging operations and only 3 or 4 portable sawmills. These small mills tend to address local building and fuel requirements. One small operator, however, cuts pine railroad ties for sale to the White Pass and Yukon Railway.

The management policy of the Cassiar TSA will emphasize a corridor 60 to 90 km (40 to 60 mi) wide straddling the major land transportation routes in the Region (e.g., the Atlin Lake Road and Highway 37). Development of the forest industry in the Stikine is expected to be slow because of poor access to markets and poor access to the timber. The near term development is likely to be limited to the emphasized corridors because the cost of building extensive access roads is prohibitive. It is also unlikely that forestry will develop in areas where there is an absence of activity created by another major industry.

4.3 Tourism

The Stikine is one of the finest big-game trophy hunting districts in North America, and the bulk of tourist revenues in the past have been derived from guiding and outfitting. There are small groups of hunting and fishing guides who work out of Atlin and Dease Lake. The Cassiar area offers high quality hunting, fishing, and sightseeing, but has not developed a guiding business.

Access to the Stikine's resources has always been a problem. Until Highway 37 was connected to Highway 16 in 1976, road access to the Stikine's wilderness areas was restricted to the Alaska Highway. Since the opening of Highway 37, increasing numbers of Alberta and BC residents are using this route to take advantage of the excellent hunting and fishing opportunities available along the corridor. This northern route is also expected to attract Alaska-bound US tourists. They now have the opportunity to make a full circle road trip and view the scenery of both Highway 37 and the Alaska Highway. Highway 37 is also a shorter route to Alaska.

The Stikine offers the following limited tourist accommodation facilities:

Atlin	Atlin Inn	- 10 units
	Kirkwood Resort Cottage	- 10 units
	Other	- 2 housekeeping units
Dease Lake	The Grayling Inn	- 16 units
	Other	- 8 units
		46 units

Emphasis in the area is on wilderness activities. The region contains bear, thinhorn sheep, deer, moose, caribou, grouse, ptarmigan, cut-throat trout, rainbow trout, arctic grayling, lake trout, dolly varden, and northern pike. The following parks (shown on Map 4) tend to attract wilderness tourists:

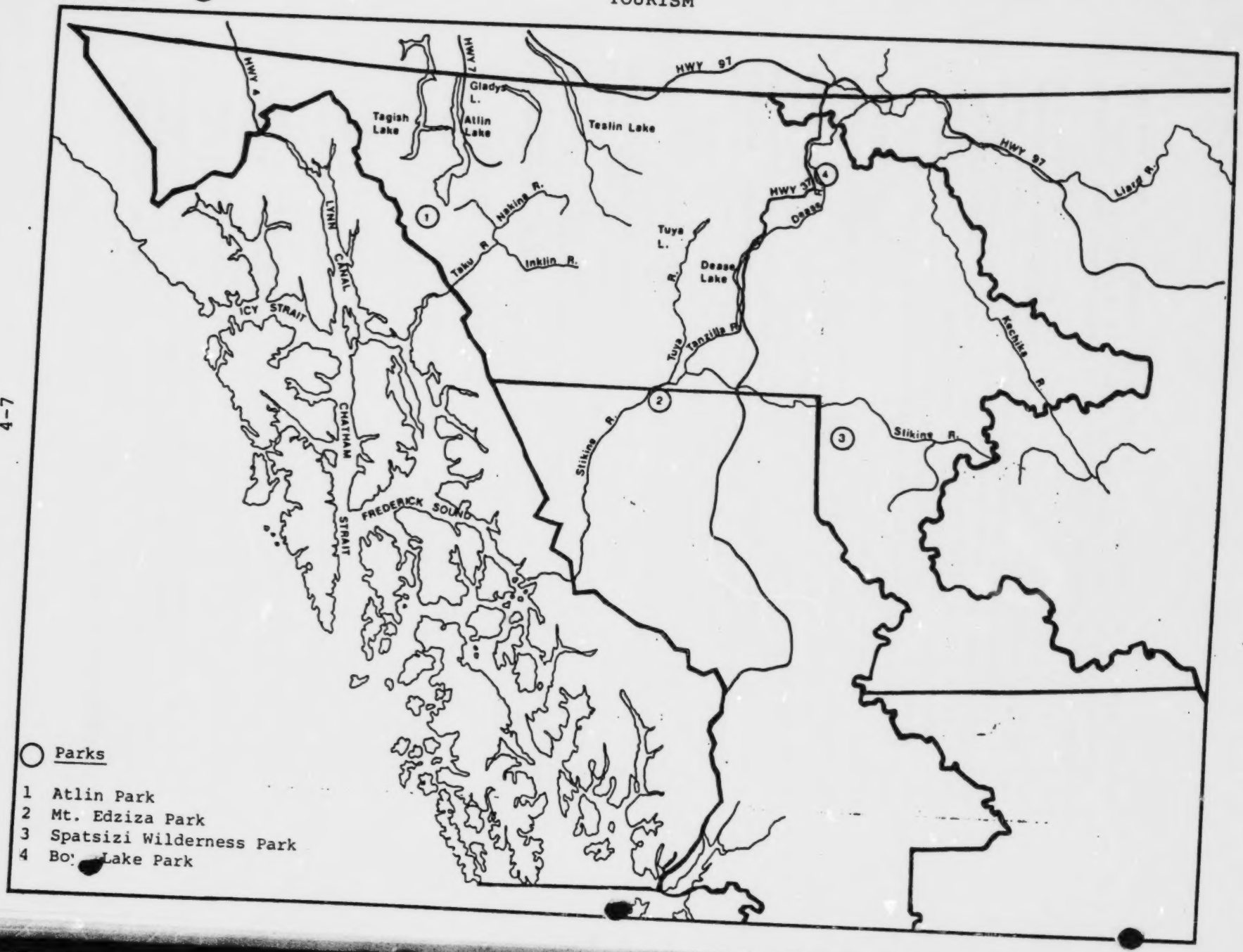
Atlin Park (271,139 ha or 669,713 acres)
- The nearest highway is #7, but there is no road access.
- The park is wild and remote. It includes part of Llewellyn Glacier which is one of the largest on the continent.

Boya Lake Park (4,597 ha or 11,355 acres)
- It has good access from Highway 37 and offers 35 campsites.

Mt. Edziza Park (232,695 ha or 574,757 acres)
- While this park lies within the Kitimat-Stikine Regional District, the surrounding Mt. Edziza Recreation Area extends into the Stikine Region.

MAP 5

TOURISM



- Highway 37 is the nearest route, but it does not provide vehicle access.
- This is one of the most significant volcanic areas in Canada. The park's features include a glacier-filled crater, numerous cinder cones, and the rainbow-hued Spectrum Range.

Spatzizi Plateau Wilderness Park (675,Ø24 ha or 1,667,3Ø9 acres)
- Highway 37 is the nearest route, but it does not provide vehicle access.
- The park features superb alpine plateau scenery and high quality wildlife habitat.

Other areas of interest to tourists include:
- the Grand Canyon of the Stikine
- the ghost towns of Laketon, Centreville, and Discovery
- the mineral springs, old cemetary, and renovated buildings in Atlin.

Although tourism is not a major contributor to the economy of the Stikine Region as a whole, it will continue to be an important source of revenue for Altin. It is also expected that the recent upgrading of Highway 37 will encourage a higher tourist usage of the section north of the Kitimat-Stikine boundary.

4.4 Fishing, Agriculture, Manufacturing, and Service Industries

There is no commercial fishing activity in the Stikine. However, there are several guides who specialize in sport fishing. No data were available on the level of their activities at the time this report was prepared.

Agricultural activity is restricted by the northern climate and tends to be limited to subsistence gardening and trapping. There were no census farms listed for the Stikine Region in 1981.

There is little export-oriented manufacturing occurring in the Region, with the possible exception of the portable sawmill activities discussed under Forestry. The high transportation costs, the difficult access to outside markets, and the small local market have not encouraged the development of secondary manufacturing. The 198Ø BC Manufacturers Directory does not list any manufacturing enterprises in the Stikine.

Cassiar and Dease Lake are connected by Highway 37, with Cassiar offering a slightly more developed industrial and retail service base. The Region's population is small and

does not warrant a well developed service centre. Cassiar's offerings are related to the needs of the mine, while Dease Lake's offerings tend to reflect the requirements of the commercial users of Highway 37 as well as some unfulfilled needs of the Telegraph Creek residents.

Atlin is a somewhat isolated centre and its small population base does not warrant significant choice in the industrial or retail service industries. Residents tend to use Whitehorse as a service and supply centre.

Table 4 illustrates the general level of service available in the Region.

TABLE 4: SERVICE INDUSTRY DEVELOPMENT

	No. of Business Establishments*		
Sector	Cassiar	Dease Lake	Atlin
Financial	1	-	-
Professional/ Business Support	-	1	-
Industrial	5	2	1
Hospitality	-	2	2
Retail	11	9	6

* These figures represent the approximate number of businesses in each category. Some businesses have been removed to make comparisons more relevant. A more detailed presentation of this sector is available in the individual community profiles.

5.Ø INFRASTRUCTURE AND COMMUNITY FACILITIES

5.1 Transportation

5.1.1 Road

The population centres in the Stikine Region are relatively isolated, and during boom times did not have the benefit of an interconnecting highway system. In fact, the Region's major transportation route, Highway 37, was not opened until 1972. Today, Atlin still looks to the Alaska Highway for its only road access.

Highway 37 provides the region with access to the rest of BC and to the Yukon territory. It connects to a major east-west route (Highway 16) at Kitwanga near Terrace, and it connects to the Alaska Highway near Watson Lake. Improvements since 1972 have made Highway 37 an important transportation corridor and have boosted the transportation sector of the regional economy. It now is a major supply route for both Dease Lake and Cassiar, as well as being the transportation route used for shipments of asbestos fibre to the coast at Stewart.

Service by major land transportation companies is limited. Regional bus services include:

- scheduled bus services from Atlin to Whitehorse
- charter bus service is available from Cassiar to Watson Lake.

Arrow Transportation Company provides service for the Brinco mine between Cassiar and Stewart. Yukon Freightways provides service between Cassiar and Whitehorse. Other local firms provide the following services:

- one truck between Cassiar and Watson Lake
- one truck between Dease Lake and Watson Lake
- one truck between Dease Lake and Terrace or Smithers
- four trucks between Atlin and Whitehorse.

5.1.2 Rail

There is no rail service available to any community in the Stikine. The White Pass and Yukon Railway provides service from Skagway on the Alaska Panhandle north through BC to Whitehorse. The BC Railway operates a rail line to an area north and east of Hazelton. Plans were underway to build a line 650 km (400 mi) northwest from Fort St. James to Dease Lake, but the project was halted in the 1970's for feasibility reasons and has not been revived.

5.1.3 Air

Air transportation is an important mode of transportation for undeveloped areas in the Stikine, but the demand for commercial airline service has not developed. In the summer months, Trans Provincial Airlines provides scheduled flights from Terrace to Dease Lake, but there are no other commercial operations offering scheduled flights into the Stikine. Cassiar residents rely on the Watson Lake airport and Atlin residents use the Whitehorse airport. Atlin, Cassiar, and Dease Lake all have gravel surfaced landing strips and are serviced by some local or regional charter companies. Atlin and Dease Lake also have float plane landing capability on the adjacent lakes.

5.1.4 Water

Transportation by water is no longer used to serve any of the three population centres in the Stikine.

5.2 Electric Power

BC Hydro and Power Authority supplies power to meet the residential and commercial needs of Atlin and Dease Lake via diesel powered generators. Cassiar Resources uses its own diesel powered generator to meet the electrical needs of Cassiar residents.

BC Hydro is proposing two dams for the Stikine River; one at Site Z, approximately 20 km or 12 miles downstream from the Highway 37 bridge, and the other immediately upstream from the confluence of the Stikine and Tanzilla Rivers. The capacity of these two projects is estimated to be 1830 megawatts (915 mW each). The proposed generation sites would be connected by 500 kV transmission lines to other proposed generation sites on the Iskut River located in the Kitmat-Stikine Regional District. The power from the proposed Stikine sites would be destined for use in southern regional load centres and eventually for use in the Lower Mainland.

BC Hydro has also investigated a future power project described as:

- Yukon-Nakonake Diversion and Nakonake Powerhouse
- Nakonake-Taku Diversion and Taku Powerhouse.

All of the above projects would involve extensive capital outlays and have environmental implications which have been examined on a preliminary basis. The timing and priorities for further development activities at these sites were unclear at the time that this report was written.

5.3 Natural Gas and Other Fuels

Natural gas is not available and coal is not used in the communities contacted. Fuel oil is available at Atlin and Cassiar, but not at Dease Lake. Local contacts indicated that wood and wood stoves are commonly used for home heating. Propane and gasoline are readily available in all three population centres.

5.4 Communications

Communications in the Stikine Region tend to be at a basic service level. Sophisticated systems are not warranted by the level of business activity.

Northwestel provides telephone service to Dease Lake and Cassiar, and BC Telephone Company serves Atlin via a Whitehorse routing system. BC Tel is linked through the Trans Canada Telephone System to telecommunication facilities throughout Canada and around the world. Local telex services are also available at Cassiar and Dease Lake.

Radio, television, and newspapers require large audiences before local production is feasible. There are no such local productions in the Stikine except for monthly newspapers in Atlin and Cassiar. Atlin and Cassiar receive CBC radio and TV signals and Cassiar has a cable TV service for area residents.

5.5 Community Infrastructure

Only Cassiar has community delivered water. Residents of Atlin and Dease Lake use a combination of private (and public) wells and truck-hauled water. Cassiar is the only community that has a sewer system; the other communities use septic tanks.

RCMP services are located in all three population centres, but no community has a full-time judicial service. Cassiar and Atlin have local fire protection in the form of trucks and a regular volunteer force.

The details of the above infrastructure characteristics can be found in the individual Community Profiles.

5.6 Medical Facilities

As with many community funded services, full medical facilities require a large population to warrant the investment. Only Cassiar is served by a hospital with full-time doctors and nursing staff. Dease Lake and Altin are served by medical clinics.

5.7 Education

All three communities have education facilities spanning primary school and high school. However, only Cassiar has education services to Grade 12. Residents in other communities must commute for their Grade 12 or enroll in correspondence courses.

5.8 Housing

There are limited vacancies in both rental and private residential dwellings throughout the Stikine. Dease Lake has a new subdivision with lots available for residential development. In Cassiar, most of the land and housing stock is owned by Brinco Ltd. and is rented or sold to employees. In Atlin, most of the land is owned by the Crown and is administered by several provincial agencies. The housing details for each community contacted can be found in the Community Profiles.

5.9 Land Availability for Commercial and Industrial Use

Development in Atlin and Dease Lake is guided by community plans which outline pertinent restrictions and areas designated for specific uses. There are no serviced industrial lots available in Atlin. Dease Lake offers some lots which are zoned for light industrial/commercial use. In general, the operative restrictions to development are few, but the level of available serviced lots is very low. Cassiar's development is guided by the mine management which owns the land. In Cassiar, there are a few serviced lots available for the appropriate businesses.

6.Ø PUBLIC ADMINISTRATION

6.1 Municipal Governments

There are no incorporated communities in the Stikine Region. With no local governments, Dease Lake and Atlin have Advisory Planning Commissions (APC) to represent residents in discussions with provincial agencies concerning planning and land use matters. Cassiar has a town council of elected representatives which present residents' views in discussions with Brinco Ltd.

6.2 Regional Government

The Stikine Region is unincorporated. It has no electoral areas and has no central governing body. Both short-term and long-term planning functions are relatively undeveloped in the region. These functions would normally include zoning amendments, subdivision referrals, Crown land referrals, resource planning, official community plans, and implementation of by-laws. The community APC's operate independently in their planning roles. The planning that is done on a regional basis is handled by several provincial agencies.

The Kitimat-Stikine Economic Development Commission, located in Terrace, has a mandate to promote development and to create job opportunities. At the time this study was prepared, the mandate extended to include the Stikine Region. The Commission responds to economic development inquiries, special commissions, and special studies. It also assists small businesses in making applications for business grants available through the federal and provincial governments. In 1983, the Commission officials are:

Lee Ellis	Chairman
Percy Tait	Vice Chairman
John Pousette	Commissioner

6.3 Senior Government

The provincial and federal governments have offices throughout the Stikine Region. The provincial government is chiefly responsible within the Region for resource management services including mineral licenses and extraction, forest management, water quality, and pollution control. The province also provides health and social welfare services, vehicle licensing, road construction and maintenance, and administers the judicial system through the provincial courts and correctional institutes.

The federal government provides regional support which includes postal services, police services, meteorological services, and Indian Affairs. Table 7 in Appendix I lists the locations of various government offices throughout the Stikine.

7.0 BUSINESS ASSISTANCE PROGRAMS

A. PROVINCIAL PROGRAMS

I. Ministry of Industry and Small Business Development

1. Export Assistance

The Trade and Industry Division sponsors four programs designed to generate a sustained expansion in the export of British Columbia goods and services. The four programs are:

(a) Trade Mission Program
supports and organizes several trade missions abroad each year;

(b) Market Development Program
assists firms in assessing potential export market opportunities and in establishing marketing arrangements outside the province;

(c) Incoming Buyers Program
assists firms in attracting potential buyers from outside the Province;

(d) Trade Show Assistance Program
provides financial assistance to support trade shows;

2. Technical Assistance Program

This program aims to provide companies with an incentive to expand their facilities, diversify their product lines, or enter new businesses by studying a specified aspect of their operations. Studies can range from marketing to financing to production analysis and must be conducted by outside consultants.

3. Information Services Program

This service provides an assessment of, or information on, subjects related to doing business in British Columbia.

4. Small Business Assistance Program

   This program provides management information, business counselling and organizational analysis to new and established small businesses throughout British Columbia.

5. LIFT -- Small Manufacturers' Development Assistance (SMDA) Program

   The SMDA Program is intended to encourage and assist the modernization, expansion and establishment of small manufacturing, processing and high technology businesses in British Columbia by providing interest-free forgivable loans for capital expenditures. The program is designed to assist in the acquisition of machinery, equipment and leasehold improvements (eligible capital costs) for developments which do not exceed $100,000 in eligible capital costs. For new businesses or for processes which involve the manufacture of new products, the program may provide funding assistance of 50% of the eligible capital costs up to a maximum assistance level of $30,000. Projects involving the expansion or modernization of an existing business may be eligible for funding assistance of 30% of the eligible capital costs up to a maximum assistance level of $18,000. Other requirements include the need for commercial viability, job creation and equity contribution to the project.

For further information on the above programs, direct inquiries to:

Ministry of Industry and
Small Business Development
Parliament Buildings
Victoria, British Columbia
V8W 3C1

(or)

Ministry of Industry and
Small Business Development
Suite 315, Robson Square
800 Hornby Street
Vancouver, British Columbia
V6Z 2C5

II. British Columbia Development Corporation (BCDC)

The Corporation offers assistance to industry through three programs:

1. Low Interest Loan Assistance

   This provides assistance to businesses that wish to modernize, expand or establish new manufacturing or processing facilities.

2. Financing Assistance

   This assistance is in the form of term loans or loan guarantees for the purchase of land, equipment, construction of buildings, working capital, etc.

3. Industrial Land Program

   This program sells or leases industrial land at rates attractive to industry. BCDC is the sales agent and administrator of Crown industrial and commercial lands.

For further information on BCDC programs, contact:

British Columbia Development Corporation
272 Granville Square
200 Granville Street
Vancouver, British Columbia
V6C 1S4

B. JOINT FEDERAL-PROVINCIAL PROGRAMS

I. Industrial Development Subsidiary Agreement

This agreement is funded through the federal Department of Regional Economic Expansion and the provincial Ministry of Industry and Small Business Development. There are four programs operating in the target area defined as "British Columbia excluding the Lower Mainland and Southern Vancouver Island".

1. Research Program

The intent of this program is to provide for private consultant studies of specific industrial opportunities including technical, marketing and feasibility studies and the preparation of special reports determining the needs and costs of community infrastructure inputs if selected industrial opportunities are to be realized.

2. Community Industrial Development

The objectives of this program are:

- to encourage the development of Economic Development Commissions in each of the main economic regions of the province;
- to ensure the supply of competitively priced industrial land in the key regional centers and
- to encourage industrial development by supporting industrial parks and sites or, in special cases, industrial malls, or advance factory space.

3. Assistance to Small Enterprise Program

This program is designed to assist the modernization, expansion or establishment of small businesses which, because of size or function, would not normally meet the criteria of existing incentive programs. The Agreement provides interest-free forgivable loans to new or established small enterprises involved in manufacturing or processing, or maintenance or repair relating to the manufacturing sector.

For further information direct inquiries to:

I.D.S.A.
c/o Ministry of Industry
and Small Business Development
Parliament Buildings
Victoria, British Columbia
V8W 3C1

(or)

I.D.S.A.
Department of Regional
Economic Expansion
600 - 1175 Douglas Street
Victoria, British Columbia
V8W 2E1

II. Travel Industry Development Subsidiary Agreement

This is a federal-provincial agreement designed to boost the travel industry and to improve Canada's balance of payments by development of strategies in five program areas:

1. Planning

Planning will develop long-term strategies for the travel industry of British Columbia by identifying trends, gaps, and future directions, and by conducting feasibility and opportunity studies. This will include resource inventories by geographic area and the formation of regional and community travel industry data banks.

2. Industry Organization

The second program will develop the institutional structure needed to coordinate travel industry associations. Thus, the industry will be assisted in development of operational plans, implementation of programs, training policies and information services.

Training programs in travel industry services will be instituted for management and staff.

3. Industry Upgrading

This program will upgrade travel industry facilities and infrastructure in the target area. It includes financial assistance, through low interest or forgivable loans, for new and expanded facilities such as resorts, motels, and certain others.

4. Travel Generators

The fourth program will support creation, improvement, or expansion of major travel generators in selected destination areas within the province. These are things for people to see and do which will entice them to stay longer.

Included would be high calibre tourist attractions such as cultural centres, special-interest parks, restored historic sites and settlements, and developed natural attractions.

5. Skiing Development

This program will aid development of world class ski resorts offering year-round, multi-recreational facilities. In addition, assistance will be provided to regional and local facilities.

For further information, contact:

The Director Travel Industry Development Assistance Program Ministry of Industry and Small Business Development 1205 Broad Street, 2nd Floor Victoria, British Columbia V8W 3G5	(or)	Manager Program Implementation Government of Canada Department of Regional Economic Expansion 600 - 1175 Douglas Street Victoria, British Columbia V8W 2E1

III. Agriculture and Rural Development Subsidiary Agreement

The intent of this federal-provincial program is to encourage development of the agricultural sector and food processing industry in rural British Columbia.

1. Research, Planning, Training and Market Promotion

New opportunities in agriculture will be identified and developed to improve stability and employment through the use of research, long-term planning, training projects and market promotion.

2. Coordinated Resource Management

This program is designed to increase the grazing capacity of Crown range and help stabilize the beef industry by taking full advantage, along with all users, of available resources.

3. Primary Resource Development

The objective of this program is to encourage improvement of underdeveloped land that can be intensively cultivated for crops that have production and market potential.

4. Support Services and Community Development

Assistance is available under this program for secondary food processing and a wide range of support services aimed at improving rural employment opportunities and agricultural stability.

For further information, contact:

ARDA Coordinator
ARDA Branch
B.C. Ministry of Agriculture
Legislative Buildings
Victoria, British Columbia
V8V 1X4

(or) Manager, Program Implementation
Government of Canada
Department of Regional Economic Expansion
600 - 1175 Douglas Street
Victoria, British Columbia
V8W 2E1

IV. Special ARDA

This joint agreement is especially designed to provide residents, primarily of Indian ancestory, in rural areas with with new and better opportunities to improve their economic circumstances.

1. Assistance to Residents of Indian Ancestory

Assistance is available to projects that will

(a) improve the incomes of native people through employment in primary activities, or

(b) involve the establishment, expansion or modernization of any native business operated in or employing a significant number of native people, or

(c) provide counselling, training or related services not available under other federal or provincial programs.

2. Assistance to Remote Rural Areas

Remote rural communities having a significant native population may qualify for additional assistance to provide for:

(a) transportation and communication facilities, or

(b) the development of community recreation facilities.

For further information, direct inquiries to:

Special ARDA Program
Department of Regional Economic Expansion
600 - 1175 Douglas Street
Victoria, British Columbia
V8W 2E1

FEDERAL PROGRAMS

I. Department of Regional Economic Expansion

1. Regional Development Incentive Program

This federal program provides incentive grants and loan guarantees for the establishment, expansion or modernization of secondary manufacturing and processing operations in the designated area. Commercial facilities, including business offices, warehousing and freight-handling facilities, shopping centres, hotels, motels and convention centres are only eligible for loan guarantees. The eligible area basically includes the northern half of British Columbia from just south of 100 Mile House.

For further information, contact:

Manager, Industrial Development
Department of Regional Economic Expansion
600 - 1175 Douglas Street
Victoria, British Columbia
V8W 2E1

Telephone: 388-3986

(and)

Program Manager
Northern B.C. District
Department of Regional Economic Expansion
706 - 2999 Victoria Street
Prince George, British Columbia
V2L 5B8

Telephone 562-4451

II. Department of Industry, Trade and Commerce

1. Enterprise Development Program

This program assists eligible manufacturing and processing firms to become more viable and internationally competitive through grants and loans. The grants are available to help develop proposals for project assistance; to study market feasibility or productivity improvement; or to procure industrial design services or develop new technology. Loans or loan guarantees are to assist restructuring or rationalization.

2. Program for Export Market Development

Incentives are offered under this program where there is a proven need to share the risk of developing and/or maintaining overseas markets; bidding on capital projects of unusual size or complexity; unusual international competition or creating an export consortium to meet sales opportunities abroad.

3. Specialized Industrial Development Support Programs and Services

Financial assistance programs are also available for ship building, defense production, fashion design, grains and oil seeds marketing and a number of other areas.

For further information contact the:

Regional Office
Department of Industry, Trade and Commerce
P. O. Box 49178
Suite 2743, Bentall III
595 Burrard Street
Vancouver, British Columbia
V7X 1K8

III. Federal Business Development Bank

This is a Crown Corporation which assists the growth and creation of business enterprises across Canada by providing them with financial and management services. It supplements such services available from others and it gives particular attention to the needs of smaller enterprises.

1. Financial Services

Financial assistance is available by means of loans, loan guarantees, equity financing, leasing, or by any combination of these methods in whatever manner best suits the particular needs of the business.

2. Counselling Assistance to Small Enterprises

CASE is a management counselling service wherein retired business persons act as counsellors on behalf of the Bank. Its purpose is to assist owners and managers of business enterprises to improve their methods of doing business.

3. Management Seminars

The Bank conducts a series of one-day management seminars at many centres across B.C. The seminar programs are designed particularly for small businesses and cover a variety of topics related to small business management.

4. Small Business Information Services

This is an information and referral service about government and other assistance programs for small business.

For further information, contact:

Federal Business Development Bank
British Columbia Region
900 West Hastings Street
Vancouver, British Columbia
V6C 1E7

D. OTHER PROGRAMS

The assistance programs which have been outlined above are considered to be the major programs applicable to the various regions of British Columbia. There are a number of other programs available from the various provincial Ministries and federal Departments. For details on these programs, please contact:

Provincial

Ministry of Industry and Small Business Development
Parliament Buildings
Victoria, British Columbia
V8W 3C1

Federal

Department of Regional Economic Expansion
600 - 1175 Douglas Street
Victoria, British Columbia
V8W 2E1

APPENDIX I

SUPPLEMENTARY TABLES

TABLE I-1: ANNUAL COMPOUND GROWTH RATE FOR BC AND THE STIKINE REGION POPULATION
(Based on Census data)

Year	Stikine Region	British Columbia
1961-66	5.7%	2.8%
1966-71	-1.9%	3.1%
1971-76	1.0%	2.5%
1976-81	4.8%	2.2%

TABLE I-2: AGE AND SEX DISTRIBUTION FOR THE POPULATIONS OF STIKINE REGION AND BC (Based on 1981 Census data)

	Stikine Region				British Columbia			
Age Group	Male	Total	% Male	% of Pop.	Male	Total	% Male	% of Pop.
Actual	1,045	1,953	53.5	-	1,365,155	2,744,467	49.7	-
0-4	105	215	49	11	98,080	191,205	51	7
5-9	130	210	62	11	96,700	189,020	51	7
10-14	65	165	39	8	106,590	208,080	51	8
15-19	90	165	55	8	122,255	239,280	51	9
20-24	90	180	50	9	124,855	251,330	50	9
25-34	245	480	51	25	245,340	489,890	50	18
35-44	150	265	57	14	174,335	341,200	51	12
45-54	100	165	61	8	144,020	279,435	52	10
55-64	50	80	63	4	121,145	256,845	47	9
65-69	15	20	75	1	50,360	108,030	47	4
70+	15	25	60	1	81,470	190,145	43	7
	1,055	1,970	54	100	1,365,150	2,744,460	50	100

TABLE I-3: ETHNIC COMPOSITION
(Based on 1971 Census data)

Ethnic Background	Stikine	%	British Columbia	%
British	660	45	1,265,460	58
French	90	6	96,550	4
Austrian	10	1	9,850	1
Chinese	15	1	44,315	2
Czechoslovakian	10	1	8,560	-
Finnish	10	1	11,510	1
German	115	8	198,310	9
Hungarian	30	2	16,600	1
Italian	45	3	53,795	2
Japanese	-	-	13,590	1
Native	210	14	52,215	2
Netherlands	30	2	70,530	3
Polish	10	1	29,545	1
Russian	5	-	22,995	1
Scandinavian	65	4	112,120	5
Slovak	-	-	2,065	-
Ukrainian	40	3	60,150	3
Other/Unknown	125	8	116,450	6
	1,470	100	2,184,610	100

TABLE I.4: LABOUR FORCE BY INDUSTRY
(Based on 1971 Census data)

Industry	No.	%
Agriculture	5	1
Forestry	5	1
Fishing & Trapping	-	-
Mining, Oil, & Gas	420	59
Manufacturing	10	1
Construction	25	3
Transportation	75	10
Communication & Utilities	10	1
Trade (except Retail)	-	-
Retail	20	3
Finance, Insurance, Real Estate	5	1
Community, Business, & Personal Service Industries	70	10
Public Administration	15	2
Other	55	8
		100

TABLE I.5: AGE DISTRIBUTION OF LABOUR FORCE
(Based on 1976 Census data)

Age Group	Stikine	%	British Columbia	%
15-19	50	7	119,900	11
20-24	100	14	170,595	15
25-34	275	39	289,265	26
35-44	155	22	210,105	19
45-54	85	12	189,560	17
55-64	45	6	116,735	10
65+	-	-	22,685	2
	710	100	1,118,845	100

TABLE I.6: EDUCATION OF LABOUR FORCE
(Based on 1976 Census data)

Education Level	Stikine		British Columbia	
	No.	%	No.	%
Less than Grade 9	100	13.8	131,140	11.7
Grades 9-13 without High School Diploma	210	29.0	374,750	33.5
High School Diploma	80	11.0	146,710	13.1
Post High School without Certification or Degree	135	18.6	187,730	16.8
Post High School with Certification or Degree	200	27.6	278,515	24.9
	725	100	1,118,845	100

TABLE I.7: SENIOR GOVERNMENT OFFICE LOCATIONS

	Cassiar	Atlin	Dease Lake
Provincial			
Department of Highways	X	X	X
Provincial Agency	X	X	
BC Forest Service		X	X
Fish & Wildlife	X	X	
Human Resources	X		
Lands, Parks, & Housing		X	
Motor Vehicle Licensing	X		
Public Health	X		
Federal			
Canada Post	X	X	X
RCMP	X	X	X

APPENDIX II

CONTACTS AND REFERENCES

LIST OF PERSONAL CONTACTS

Buckley, F., Town Administrator, Cassiar
Cleland, D., Housing Division - Crown Land Inventory Department, Ministry of Lands, Park and Housing, Victoria
Coatta, E., Climate Information, Environment Canada, Vancouver
Fraser, D., Notary Public, Dease Lake
Holt, E., Operations Superintendent Timber, BC Forest Service, Dease Lake
Hunter, Mr., District Inspector, Ministry of Energy, Mines & Petroleum Resources, Smithers
Jones, P., Resource Clerk, BC Forest Service, Dease Lake
Joyce, E., Research - Parks & Recreation Branch, Ministry of Lands, Parks & Housing, Victoria
Sommerville, R., Director of Geology, Ericson Gold Mine, Cassiar
Thompson, G., Research, Ministry of Agriculture & Food, Victoria
Whelock, P., Government Agent, Atlin
White, D., Research, Ministry of Tourism, Victoria
Zubac, F., Chief Accountant, Cassiar Resources Ltd., Cassiar

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-24-27 July.

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-29:32-39

Canada West - Winter 1971. Historic Atlin - N.L. Barlee
-3:21-35

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STIKINE REGION

COMMUNITY PROFILES

Prepared for:

Regional District of
Kitimat-Stikine
Economic Development
Commission

Prepared by:

DPA Consulting Limited
Vancouver, BC

December 1982

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The responsibility for the content of this report is the consultant's alone, and the conclusions reached herein do not necessarily reflect the opinions of those who assisted during the course of this investigation or the federal and provincial governments which funded the study.

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Dease Lake (Unincorporated)	
Atlin (Unincorporated)	

FORWARD

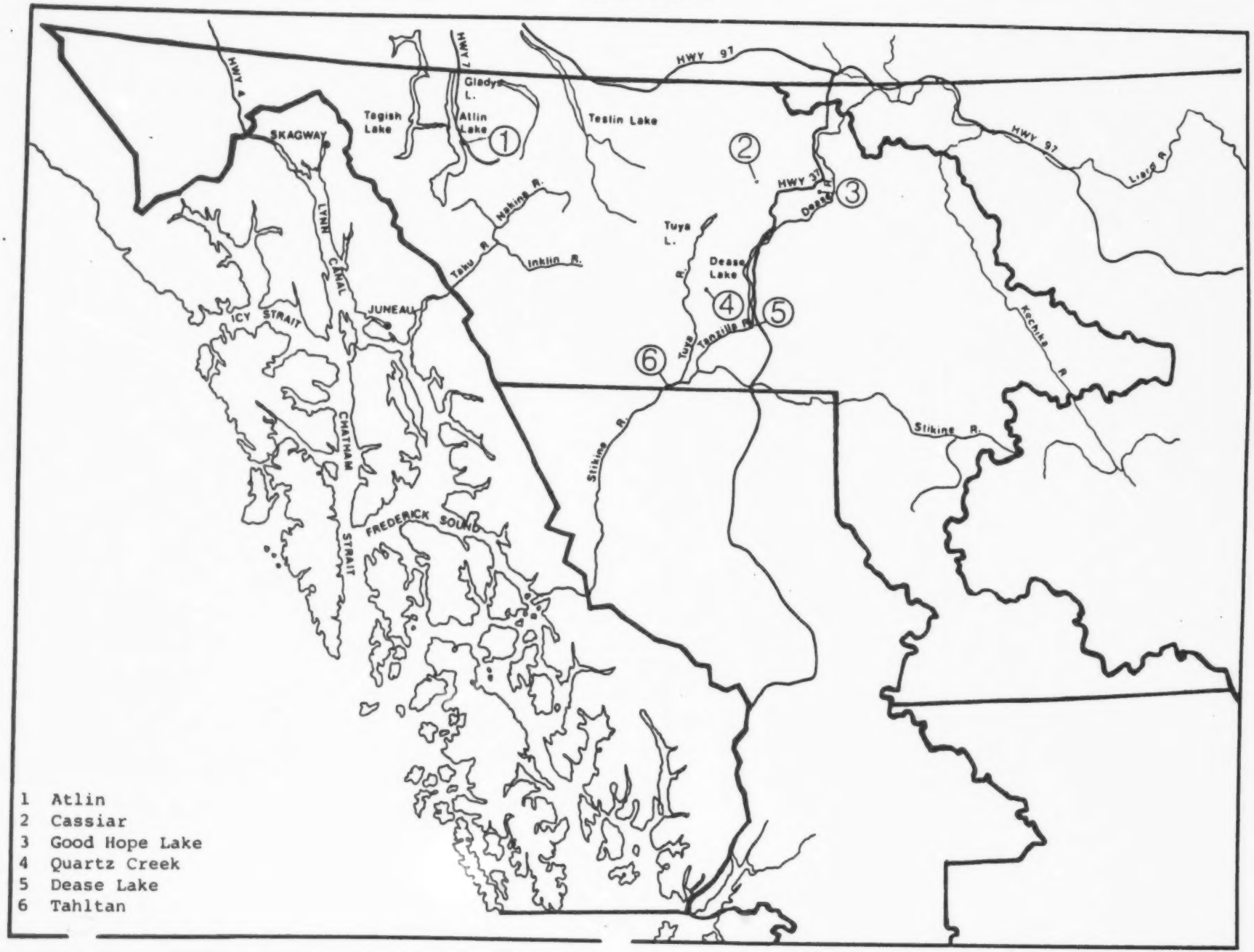
The Community Profiles contained herein were prepared by DPA Consulting Limited at the request of the Regional District of Kitimat-Stikine.

The engagement involved the preparation of four reports: an Economic Profile for the Stikine Region, and Community Profiles for Cassiar, Dease Lake and Atlin. The Regional Economic Profile provides a summary of the area's natural resources, demography, history, economy, settlement pattern, infrastructure and development potential. The Community Profiles were designed to be used independently of the Regional Economic Profile. Each Community Profile focuses on community level information regarding history, demography, economy, services and infrastructure.

The intent of these Community Profiles is to provide a catalogue of resources available to those interested in economic development within the community area. They are not intended to be economic opportunity studies.

The data used in these reports were obtained from published and unpublished sources in both government and industry. An extensive interview process with community and business leaders served to update the database. These interviews helped to provide qualitative assessments and interpretations of present and future area conditions.

COMMUNITIES



CASSIAR (UNINCORPORATED)

A. INTRODUCTION

Location

Cassiar rests in the valley of the Troutline Creek on BC's northern frontier. The distance from Cassiar to other BC centres is:

Reference Community	By Air	By Road
east of Atlin	135 mi (220 km)	355 mi (570 km)
north of Stewart	235 mi (375 km)	430 mi (690 km)
north & west of Vancouver	745 mi (1200 km)	1300 mi (2100 km)

Climate

Mean Daily Temperature (Annual Average)	:	-2.9o C
Temperature Extremes	:	-47.2/29.4o C
Mean Rainfall	:	29.2 cm
Mean Snowfall	:	408.7 cm

History

Placer gold was discovered in the Cassiar area in 1875, and gold mining has played a small, but significant, role in the economy to the present day. During the gold rush days, Troutline Creek was a placer stream and the key town was Centreville. Centreville had an estimated population between 500 and 2,000, but today it is a ghost town.

There was no major settlement on the present site of Cassiar until 1953 when Cassiar Asbestos Corporation Ltd. (later known as Cassiar Resources Ltd.) opened an asbestos mine to develop the high quality reserves discovered on McDame Mountain. The asbestos fibre produced at Cassiar was trucked to the Yukon and then transported on the White Pass and Yukon Railway to the Alaskan port of Skagway. The asbestos was subsequently shipped to Vancouver for distribution. In 1978 the Stewart-Cassiar section of Highway 37 became the new shipment route. This provided a direct pathway to the coast. It also saved a rail haul, a 345 mile (550 km) road haul, and 300 miles (480 km) of ocean transportation.

Cassiar was originally developed simply to support the

asbestos operation. In addition to high wages, the town offered a considerable range of urban amenities in an effort to attract the necessary skilled technicians and tradespeople. Rising metal prices encouraged other companies to explore and develop several mineral deposits in the area. These companies and their employees also draw on the town's facilities.

B. HUMAN RESOURCES

Population Size and Trends

Based on the 1981 Census, the population is 1,053. This indicates no growth when compared to the 1971 Census figure. Problems in defining permanent residency may, however, have caused the 1981 Census figure to be low. Local sources suggest that 1,500 would be a better estimate of the current population.

Ethnic Origin (1971 Census)

British	42%
Native	16%
German, Austrian, Dutch & Hungarian	13%
French	6%
Scandanavian	4%
Italian	3%
Ukranium	3%
Asian	2%
Other	11%

Age Distribution

Age-Group	Population	Labour Force (1976 Census)
0-14	29%	--
15-24	16%	19%
25-44	42%	64%
45-54	8%	13%
55-64	4%	4%
over 64	1%	--
	100%	100%

Education of Labour Force (1976 Census)

Less than Grade 9	12%
Grades 9-13 without High School Diploma	32%
High School Diploma	11%
Post High School without Certificate or Degree	22%
Post High School with Certificate or Degree	23%
	100%

Fah

Miscellaneous

Size of Labour Force : 560-800 (based on 1976 Census figure of 53% of population)

Level of Unemployment : 3.5% of labour force (1976 Census)

C. ECONOMIC SECTORS

Introduction

Cassiar is a company-dominated town. Cassiar Resources Ltd. built the town to house and comfort its mine employees. There is no local government, but the company provides an alternative. Cassiar Resources provides all the normal municipal services, including sewer, water, power, roads, street lighting, and garbage collection. The company subsidizes the price of goods sold in the company owned store, and until recently, it also operated a hospital. (This is now a public facility and is funded by the Provincial Government.) An elected body, the "Townsite Advisory Committee", presents the population's concerns and makes recommendations to company management.

Mining

As suggested, mining provides the only significant factor in Cassiar's economy. The Cassiar asbestos mine (owned by Brinco Limited) is an open pit operation and its mill produces 100,000 tons of fibre each year. It is the only asbestos mine in western Canada. The mine employs approximately 600 people and has an expected life of an additional 20 years (based on current data).

The Erikson Gold Mine (owned by Nu-Energy Development Corporation Ltd.) is located 15 road miles (24 km) south of Cassiar. It opened in 1978 and produces 20,000 oz of gold each year. It has 2 1/2 years of proven reserves,but it has an expected life which is much longer. This is based on a continual exploration program. The company employs 65 people and has established a separate community near the mine site. The company provides the community with its power and water services, and the residents use Cassiar as their source of supplies and recreation facilities.

The Cusac Gold Mine (owned by Cusac Industries Inc.) opened in 1980 and production has involved both gold and silver. It employs approximately 20 people. There are also about 6 active placer gold mines in the area which provide seasonal employment for about 40 people.

Located 4 miles (6 km) south of Cassiar is the large Huntsman molybdenite deposit. It is owned by New Jersey Zinc

Exploration Company (Canada) Ltd. The exploration and evaluation process is continuing on a joint venture basis with Shell Canada Resources Ltd. Metal prices and the lack of an available power supply are major constraints to current feasibility.

Tourism

There are no guides or outfitters working out of Cassiar. There are also no commercial tourist developments located here. The high quality of fishing, hunting, camping and sightseeing opportunities in the Cassiar area, however, indicates a potential for some level of future development in this sector.

Service Industries

Sector	Type	Description
Financial	Bank	Royal Bank
	Other	none
Professional	Accountants	none
	Lawyers	none
	Notary Public	none
Industrial	Machine shop) Welders)	Mill has skilled technical people but none offer an independent service.
	Explosives	1
	Equipment & Tires	2
	Construction	1
Organizations	Union	United Steel Workers of America
		Retail Clerks Union
Hospitality	Hotel	none
	Motel	none
	Trailer park	none
	Restaurant	none. Cassiar Community Club operates snack bar and lounge.
Retail and Other	General store	1
	Food	1
	Liquor store	1
	Electronics	1
	Serv. Staton	2
	Travel Service	1
	Gifts & Crafts	2
	Personal Care	1
	Misc.	1

D. INFRASTRUCTURE AND COMMUNITY FACILITIES

Transportation Facilities and Services

Sector	Facility/Description
Highway	- roads are paved in Cassiar - the road to Highway 37 includes about a 10 mile stretch of gravel. Highway 37 is paved most of the way south to Dease Lake and north to Watson Lake. - snow removal is adequate. The roads are usable on a year-round basis.
Rail	- no access
Air	- gravel surfaced 3500 ft landing strip. It does not have a Transport Canada Public Airport License. - no approach lights limit night operation. - no buildings - local plane owners do own mechanical work - no charter planes originating from Cassiar - no regular flights scheduled. Watson Lake is the nearest airport with commercial service. - 4 private planes.
Bus	- charter bus service from Watson Lake
Public	- no public transportation
Truck	- Arrow Transportation Co. provides service to Stewart. - Yukon Freightways provides service to the Yukon (and Whitehorse) - 1 local trucking firm provides service to Watson Lake.

Utilities

Type	Description
Power	- Cassiar Resources owned and operated diesel powered generator
Telephone	- Northwestel
Water	- pumped from Troutline Creek
Gasoline	- available from 2 service stations
Coal	- none available locally
Fuel Oil	- available through service stations
Natural Gas	- none available locally. Most residents use steam (from Cassiar Resources) or diesel to heat their homes
Propane	- available at the service stations
Sewage	- some septic tanks, but mainly use a sewer system which includes a sewage lagoon and an aerobic treatment plant

Communications

Type	Description
Telecommunications	- telex available through Cassiar Resources Ltd., Marvel Travel Ltd., and School District #87 Administration Office
Radio	- no local station. CBC available from Whitehorse - WSTV provides 3 FM stations (from Vancouver, Edmonton, and Toronto)
Newspaper	- "The Cassiar Courier" is published monthly
Television	- CBC is available from Whitehorse - for those on cablevision, 5 stations are available in addition to HBO.

Social Services

Type	Description
Law Enforcement	- 3 RCMP representatives
Fire Protection	- volunteer unit (20 members) - 2 pumper trucks
Medical	- 1 hospital including 8 adult beds, 3 doctors, and 5 nurses - 1 ambulance
Education	- 1 school, grades 1-12. A new school is under construction.

Land Use and Housing

Type	Description
Zoning	- no formal zoning is in place. Virtually all of the land in the area is owned by Cassiar Resources Ltd. As such , the company determines how development will proceed.
Availability	- few serviced lots available for development. If a business is deemed appropriate by the company, Cassiar Resources Ltd. will usually develop the property and then sell or lease the property to the new operator.
Residential	- few vacant houses. Approximately 2/3 of the housing stock is owned by the company and rented or sold to employees. The other 1/3 is on land rented to people providing a community service or support for business (e.g., doctors, teachers).

E. PUBLIC ADMINISTRATION

Federal/Provincial Government Services

Type	Description
Agents	(in addition to RCMP representatives) - Government agent - Department of Highways (maintenance crew) located 25 miles (40 km) away at Good Hope Lake - Human Resources - Public Health - Fish and Wildlife - Post Office - Motor Vehicle Licensing

Municipal Government

Type	Description
Representatives	- not incorporated and has no local government - Town Council (8 elected people) represents the town in discussions with Cassiar Resources Ltd. (e.g., regarding improvements). They have an operating budget of $35,000/year supplied by Cassiar Resources Ltd.

DEASE LAKE (UNINCORPORATED)

A. INTRODUCTION

Location

Dease Lake is just a few miles from the southern end of the Arctic Watershed. The town itself is on the southern end of the lake at the junction of Telegraph Creek Road and Highway 37. Dease Lake is situated 60 miles (95 km) south of Cassiar, 175 miles (280 km) north of Stewart, and 695 miles (1,120 km) northwest of Vancouver. (Dease Lake is actually 80 road miles or 130 road km south of Cassiar.)

Climate

Mean Daily Temperature (Annual Average)	:	-1.2o C
Temperature Extremes	:	-51/34o C
Mean Rainfall	:	22.6 cm
Mean Snowfall	:	186.7 cm

History

In the 1830's Russia was in control of the area known today as the Alaskan Panhandle. They recognized the rights of British fur traders, but they also discouraged British attempts to move inland on the Stikine River. In 1833, J.M. McLeod, Chief Area Trader for the Hudson Bay Company (HBC), discovered Dease Lake. In 1837, Robert Campbell, Chief Factor of HBC, set up a trading post at Dease Lake. In 1873, gold was discovered in Dease Creek, a few miles north of the Dease Lake trading post. The find was substantial, and the town of Laketon sprang up. Laketon boasted a population of 2,000 people in 1874. When Laketon died, Dease Lake maintained its position as a supply centre for the mining and fur trading interests in the area.

In 1940, a shipyard was constructed at Dease Lake. It produced a sternwheeler, three other lake boats, and 12 barges to transport building materials for the construction of an airport at Watson Lake. However, by 1970 the population had dwindled to approximately 50 people. The recent growth to over 200 people is largely the result of opening Highway 37 south to Stewart and Terrace.

B. HUMAN RESOURCES

Population Size and Trends

Based on the 1981 Census, the population of the Dease Lake Indian Reserve is 237. Local sources estimate the total Dease Lake area population to be in excess of 300. The population has quadrupled since the 1971 Census. However, in the last 5 years it has been reasonably stable.

Age Distribution (1976 Census)

Age Group	Population	Labour Force
0-14	36%	--
15-24	17%	31%
25-44	34%	57%
45-54	5%	6%
55-64	5%	6%
over 65	3%	--
	100%	100%

Education of Labour Force (1976 Census)

Less than Grade 9	23%
Grades 9-13 without High School Diploma	24%
High School Diploma	12%
Post High School without Certification or Degree	12%
Post High School with Certification or Degree	29%
	100%

Miscellaneous

Size of Labour Force : 104 (based on 1976 Census figure of 44% of population)

Level of Unemployment : 13% of labour force (1976 Census)

C. ECONOMIC SECTORS

Overview

Dease Lake functions as a regional centre providing provincial government services, tourist accommodation, and supplies for the area in general. The major economic activities of this community revolve around transportation and mineral exploration.

Transportation

Dease Lake is situated directly on Highway 37, and it offers

a variety of services to the corridor users. It is one of the few sources of gasoline and vehicle maintenance on the road from Cassiar to Stewart. The maintenance crew for the Highway resides in Dease Lake and they represent a major source of employment.

Dease Lake is also an important supply centre for residents of Telegraph Creek.

Mining

There are three major ore deposits in the area which are at the exploration stage.

Kutcho Creek (owned by Esso Minerals Canada) is a copper-zinc deposit located about 65 miles (105 km) southeast of Dease Lake. This is a high grade copper deposit and is of particular interest because it is not representative of the lower grades typically found in the province. The life expectancy of a potential mine would be approximately 10 years, and would employ approximately 220 people.

Letain Lake (owned by Brinco Limited) is an asbestos prospect which lies approximately 15 miles (24 km) northwest of the Kutcho Creek copper deposit. The fibre in this area is, however, lower in quality and quantity than that found in Cassiar. There are no plans for development in the near future.

Red Chris Group is a copper prospect located approximately 50 miles (80 km) south of Dease Lake. (Texas Gulf Incorporated is the majority shareholder.) The last major exploration of this property occurred in 1976.

Forestry

While it is not clear that the forests in this area can support development in the near future, the BC Forest Service has its headquarters for Cassiar District at Dease Lake. The airport has also been expanded to accommodate water bombers.

Agriculture

Historically, trapping has been an important activity in this area. The traplines are still active and currently involve about 15 residents. Opportunities for agriculture are severely restricted. The recently developed community plan sets aside a garden area which is intended to be reserved for the use of the whole community.

Tourism

In addition to catering to the commercial corridor traveller, Dease Lake offers the wilderness experience which draws tourists to other parts of the Stikine area. While there is only a small group of locals involved in guiding and outfitting, the appeal is demonstrated by the high volume of licenses sold. (In 1981 the value of angling and hunting licenses and species tags was $7,000.)

Service Industries

Sector	Type	Description
Financial	Bank	none. Nearest bank is in Cassiar
	Other	Post Office. Postal money orders are common (as is banking by mail)
Professional	Accountants	none
	Lawyers	none
	Notary	1
	Insurance Agent	1
Industrial	Contractors	1 (loader-grading service)
	Tradespeople	several (welders, carpenters, electricians and plumbers)
Hospitality	Hotel	none
	Motel	2 properties offer total of 24 rooms
	Trailer park	none
	Camp site	1 property offers 15 spaces
	Restaurants	1
	Bar/lounge	1
Retail & Other	Hardware store	1
	Grocery store	1
	Bakery	1
	Laundromat	1
	Gas station	3 companies provide gas and 2 offer repair service
	Souvenir/Novelty	2
	Liquor store	none

D. INFRASTRUCTURE AND COMMUNITY FACILITIES

Transportation Facilities and Services

Sector	Facilities/Description
Highway	- roads are seal coated in Dease Lake - Highway 37 is seal coated north to Cassiar and is gravel surfaced South to Meziadin. - maintenance is good and the highway is open year round.
Rail	- no access.
Air	- gravel surface landing strip. - no buildings. - no specialist mechanics. - charters: 4 helicopters 2 fixed wing planes with and without floats available from Watson Lake - 6 private planes - Trans Provincial Airlines Ltd. offers 5 flights/week to Terrace (summer only)
Bus	- no charter bus service.
Public	- no public transportation.
Taxi	- 1 vehicle
Truck	- 1 truck weekly service to Terrace and Smithers. - 1 truck hauls mail and some freight from Cassiar - hauling service also available from Terrace to Cassiar and all points along Highway 37.

Utilities

Type	Description
Power	- BC Hydro diesel powered generator.
Telephone	- Northwestel
Water	- available from: . private wells . 1 public well . Tanzilla Creek (truck hauled) . Department of Highways water system.

Gasoline	- 2 retail sources in town.
Coal	- none available locally.
Fuel oil	- available in Stewart or Terrace.
Natural Gas	- none available locally. (Wood stoves are common).
Propane	- available at service station.
Sewage	- septic tank systems. - some outhouses in use as well.

Communications

Type	Description
Telecommunications	- telex available.
Radio	- no local station. - no reception available (except at night).
Newspaper	- no local paper.
Television	- 2 satellite dishes provide reception of BCTV and the Knowledge Network.

Social Services

Type	Description
Law Enforcement	- 2 RCMP representatives. - circuit judge visits 4 times per year.
Fire Protection	- no volunteer unit. - small pumper truck from BC Forest Service. (summer only)
Medical	- 1 clinic including 1 doctor and 1 nurse. - 1 ambulance provided by Department of Highways.
Education	- 1 school, grades 1-10.
Recreation	- outdoor ice rink. - playing field (with baseball diamond). - community hall.

Land Use and Housing

Type	Description
Zoning	- restrictions as laid out in the "Official Community Plan" have been kept simple. - specific building restrictions placed on: - flood plain area - river banks - flight path of air strip.
Land	- most of land is owned by the Crown and is administered by several provincial agencies.
Availability	- there are 8 lots zoned light industrial/commercial, but they are situated a mile from the highway. Since local businesses tend to draw customers from the highway traffic, and because signing is prohibited, little interest has been shown in these lots.
Residential	- there is no surplus of houses or rental accommodation. - there is a new subdivision with 12 vacant lots. - the Telegraph Creek road is available for those wanting to stake residential lots subject to approval by the Ministry of Lands, Parks and Housing.

E. PUBLIC ADMINISTRATION

Federal/Provincial Government Services

Type	Description
Agents	(in addition to RCMP representatives) - BC Forest Service - Department of Highways - Parks Branch - Post Office.

Municipal Government

Type	Description
Representatives	- Not incorporated. - Advisory Planning Commission represents Dease Lake in discussions of new provincial programs and to assist in planning and discussing land use matters.

ATLIN (UNINCORPORATED)

A. INTRODUCTION

Location

Atlin is located in the north-west corner of BC on the shore of one of BC's largest natural lakes. Situated only 30 miles (45 km) south of the Yukon Territories border, Atlin is 290 miles (465 km) north and west of Stewart, and is 825 miles (1,330 km) north and west of Vancouver.

Climate

Mean Daily Temperature (Annual Average)	:	-0.2o C
Temperature Extremes	:	-50/30o C
Mean Rainfall	:	16.2 cm
Mean Snowfall	:	121.4 cm

History

The Atlin area was originally a hunting ground for the Tlingit people who travelled 80 miles (128 km) north from their villages on the Taku River system to intercept migrating caribou herds. The Tlingits moved permanently to Atlin Lake when gold was discovered in 1898 on Pine Creek. Two towns, Atlin and Discovery, sprouted to meet the needs of the gold seekers. Atlin became the supply centre for the gold mining activity. The area grew to house a peak population in excess of 6,000. By 1910, however, the population had dropped to approximately 500, as the restless miners moved to another gold strike in Alaska. During the Second World War, many of the remaining miners left to enlist or to work in essential industries. Although mining on a small scale never disappeared entirely, the town's population steadily declined until the mid 1960's.

B. HUMAN RESOURCES

Population Size and Trends

Based on the 1981 Census, the population is 230. (However, the "Official Community Plan - October 1981", refers to an estimated population which is 100% larger.) The population swells significantly during the summer, but the extent depends on the level of mining activity. The population is growing. An estimated 30% of the population have been residents for less than two years.

Education of Population ("Official Community Plan")

Attended High School	50%
Attended some form of post secondary education facility	45%

Miscellaneous

The opportunity to live in a pioneer life-style attracted many of the current residents. Only 60% of the workforce have full-time jobs. This results in many people taking multiple jobs throughout the year.

C. ECONOMIC SECTOR

Overview

Atlin is a small community with only 60 businesses registered in 1981. It is somewhat isolated and it is dependent upon Whitehorse for supplies and communication to the outside world. The economy of Atlin is based on small-scale placer mining, mineral exploration, tourism, and government employment. Most of the economic activity occurs during the summer months.

Mining

Placer gold mining is the primary mining activity. While the level of participation fluctuates, it has been estimated that 270 miners are currently involved. No large companies participate. Mineral exploration activity has been significant in recent years. However, the two major ore bodies with mine potential (Ruby Creek - Molybdenum; Atlin-Ruffner - Silver) have not been developed because of market conditions and metal prices.

Forestry

This industry operates at the cottage level. Currently, there are 3 family run small-scale sawmills employing a total of about 10 people. The products include unfinished 2x4, 2x6, 2x8, as well as squared and notched logs for cabin construction. There is no developed logging business in the area.

Tourism

Tourism provides a major source of revenue for Atlin, but there are few businesses which specifically cater to the visitor. These include 7 hunting guides and outfitters, 5 fishing guides, and 4 seasonal souvenir shops.

Service Industries

Sector	Type	Description
Financial	Bank	none. Nearest bank is in Whitehorse
	Other	Post Office. Postal money orders are common
Professional	Accountants	none. Available in Whitehorse and in Dawson Creek
	Lawyers	none.
Industrial	Welding shop	1
Hospitality	Hotel	1 property offering 10 rooms
	Motel	2 properties offering 10 cabins and 2 housekeeping units
	Trailer park	none
	Restaurant	1
	Bar/lounge	1
Retail & Other	General store	1
	Grocery store	2
	Liquor store	1
	Souvenir/Novelty	4 seasonal only
	Other	none

D. INFRASTRUCTURE AND COMMUNITY FACILITIES

Transportation Facilities and Services

Sector	Facilities/Description
Highway	- only major access to Atlin is along 48 miles (77 km) of a gravel surfaced road to the Alaska Highway. From there, it is paved to Whitehorse. - reasonably well maintained on a year round basis.
Rail	- no access.
Air	- gravel surface landing strip - no buildings - 1 local mechanic - charters: 3 helicopters 3 fixed-wing planes - 7 private planes - float plane landing strip.

Education of Population ("Official Community Plan")

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Attended some form of post secondary education facility	45%

Miscellaneous

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	Grocery store	2
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	Other	none

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Rail	- no access.
Air	- gravel surface landing strip - no buildings - 1 local mechanic - charters: 3 helicopters 3 fixed-wing planes - 7 private planes - float plane landing strip.

Bus	- Atlin-Whitehorse service (Mon, Wed & Fri) which is coordinated with mail service and the flight to Vancouver from Whitehorse.
Public	- no public transportation.
Truck	- 1 company (using 4 trucks) hauls supplies, fuel, and furnishings as well as providing a general service to Whitehorse.

Utilities

Type	Description
Power	- BC Hydro diesel powered generator
Telephone	- BC Tel via a Whitehorse routing system
Water	- available from: Atlin Lake (truck hauled) wells
Gasoline	- 1 service station (which is supplied from Whitehorse)
Coal	- not used much locally - wood stoves are very common
Fuel Oil	- available at service station
Natural Gas	- none available locally
Sewage	- septic tank systems

Communications

Type	Description
Telecommuncations	- a private firm in Whitehorse provides satellite telecommunications
Radio	- no local station - reception of Whitehorse station
Newspaper	- local monthly paper - 2 Whitehorse papers available on a daily basis - Vancouver papers available on a delayed basis
Television	- BCTV and CBC available via a Whitehorse relay station.

Social Services

Type	Description
Law Enforcement	- 1 RCMP representative
Fire Protection	- volunteer unit (25 members) - 2 pumper trucks
Medical	- 1 Red Cross facility (one room clinic) - 4 nurses available on a rotation basis - 1 ambulance
Education	- 1 school, grades 1-10 (new structure) with capacity for about 200 students.

Land Use and Housing

Type	Description
Zoning	- a community plan exists, but there are few operative zoning restrictions
Restrictions	- standard electrical and public health inspections required - no major restrictions
Land	- most land is owned by the Crown and is administered by several provincial agencies
Industrial	- no serviced lots available
Residential	- no surplus of houses or rental accommodation - few trailers - no apartments (but some houses are rented out) - many of the homes have log exteriors - cost of a typical house is estimated at $70,000: recent construction 2,000 square feet on 2 floors full basement well septic tank.

E. PUBLIC ADMINISTRATION

Federal/Provincial Government Services

Type	Description
Agents	(In addition to RCMP representatives) - Government agent (Provincial) - Fish and Wildlife officer - B.C. Forest Service - Post Office - Department of Highways.

Municipal Government

Type	Description
Representative	- not incorporated - no local government - Advisory Planning Commission developed the community plan and represents Atlin in discussion on land use matters with the provincial ministry involved. - Board of Trade with representatives from 8-10 businesses.

POOR

QUALITY

ORIGINAL